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The Wyoming Greater Sage-Grouse Proposed Land Use Plan Amendment and Final Environmental Impact Statement

Volume 1: Executive Summary, Chapters 1–2, and Maps



May 2015

BLM

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BLM/WY/PL-15/015+1610

Errata Sheet

Wyoming Greater Sage-Grouse LUP Amendment and Final Environmental Impact Statement

As of June 8, 2015 the following errata and clarifications to the FEIS are presented below.

Page	**Differences in the original text and the amendment are highlighted in gray**
Appendix M M-001 to M-336	Original Text: All of Appendix M Amendment: The correct version is posted on the website at http://www.blm.gov/sagegrouse
Chapter 2 2-12	Original Text: 2.6.3 BLM Proposed LUP Amendments Amendment: 2.6.2 BLM Proposed LUP Amendments
Chapter 2 2-64	Original Text: 2.6.4 Forest Service Proposed LUP Amendments Amendment: 2.6.3 Forest Service Proposed LUP Amendments
Chapter 2 2-64	Original Text: **GRSG-GRSGH-ST-003-Standard** - Design habitat restoration projects to move towards the desired conditions in table 1 and incorporate the concepts outlined in Appendix C - *Reclamation Plan and* Appendix D - *Monitoring Framework.* Amendment: **GRSG-GRSGH-ST-003-Standard** - Design habitat restoration projects to move towards the desired conditions in Table 2-5 and incorporate the concepts outlined in Appendix C - *Reclamation Plan and* Appendix D – *Implementation Framework.*

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Wyoming State Office
5353 Yellowstone Road
Cheyenne, WY 82003

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Rocky Mountain Regional Office
740 Simms Street
Golden, CO 80401
Intermountain Region
324 25th Street
Ogden, UT 84401

In reply refer to:
1610 (WY930)

Dear Reader:

Enclosed is the Wyoming 9-Plan Sub-regional Greater Sage-Grouse (GRSG) Proposed Land Use Plan Amendment (Proposed LUPA) and Final Environmental Impact Statement (FEIS), one of fifteen sub-regional efforts being conducted as part of the Bureau of Land Management (BLM) and Forest Service National Greater-Sage Planning Strategy. The BLM and Forest Service prepared the Proposed LUPA/FEIS in consultation with cooperating agencies, taking into account public comments received during this planning effort. The purpose of the Proposed LUPA is to amend the Casper, Kemmerer, Newcastle, Pinedale, Rawlins and Rock Springs BLM Resource Management Plans (RMPs) and the Bridger-Teton National Forest (BTNF), Medicine Bow National Forest (MBNF), and Thunder Basin National Grassland (TBNG) Land and Resource Management Plans (LRMPs) to identify and incorporate appropriate conservation measures to conserve, enhance and/or restore Greater Sage-Grouse habitat by reducing, eliminating, or minimizing threats to that habitat. The need for action is in response to the US Fish and Wildlife Service's (USFWS) March 2010 "warranted, but precluded" Endangered Species Act listing petition. The USFWS found that the inadequacy of regulatory mechanisms was identified as a significant threat to GRSG in their finding on the petition to list the GRSG. Land use plan conservation measures were identified as the BLM's and Forest Service's principal regulatory mechanism.

This Proposed LUPA/FEIS has been developed in accordance with the National Environmental Policy Act of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, and the National Forest Management Act of 1976, as amended. The Proposed LUPA is largely based on Alternative E, the preferred alternative in the Draft LUPA/DEIS, which was released on December 27, 2013. The Proposed LUPA/FEIS contains the Proposed Plans, a summary of changes made between the Draft LUPA/DEIS and Proposed LUPA/FEIS, impacts of the Proposed Plan, a summary of the written and verbal comments received during the public review period for the Draft LUPA/DEIS, and responses to the comments.

In accordance with 36 C.F.R. § 219.59, the Forest Service will waive their objection procedures of this subpart and instead adopt the BLM's protest procedures outlined in 43 C.F.R. § 1610.5-2.

Pursuant to BLM's planning regulations at 43 CFR 1610.5-2, any person who participated in the planning process for this Proposed LUPA and has an interest which is or may be adversely affected by the planning decisions may protest approval of the planning decisions within 30 days from date the Environmental Protection Agency (EPA) publishes the Notice of Availability of the FEIS in the Federal Register. For further information on filing a protest, please see the accompanying protest regulations in the pages that follow (labeled as Attachment # 1). The regulations specify the required elements of your protest. Take care to document all relevant facts. As much as possible, reference or cite the planning documents or available planning records (e.g. meeting minutes or summaries, correspondence, etc.).

Emailed protests will not be accepted as valid protests unless the protesting party also provides the original letter by either regular mail or overnight delivery postmarked by the close of the protest period. Under these conditions, the BLM will consider the emailed protest as an advance copy and will afford it full consideration. If you wish to provide the BLM with such advance notification, please direct emailed protests to: protest@blm.gov.

All protests must be in writing and mailed to one of the following addresses:

Regular Mail:
Director (210)
Attn: Protest Coordinator
P.O. Box 71383
Washington, D.C. 20024-1383

Overnight Delivery:
Director (210)
Attn: Protest Coordinator
20 M Street SE, Room 2134LM
Washington, D.C. 20003

Before including your address, phone number, email address, or other personal identifying information in your protest, be advised that your entire protest – including your personal identifying information -- may be made publicly available at any time. While you can ask us in your protest to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

The BLM Director, in agreement with the responsible official for the Forest Service, will make every attempt to promptly render a decision on each protest. The decision will be in writing and will be sent to the protesting party by certified mail, return receipt requested. The decision of the BLM Director shall be the final decision of the Department of the Interior on each protest. Responses to protest issues will be compiled and formalized in a Director's Protest Resolution Report made available following issuance of the decisions.

Upon resolution of all land use plan amendment protests, the BLM and Forest Service will issue an Approved LUPA and Record of Decision (ROD). The Approved LUPA and ROD will be mailed or made available electronically to all who participated in the planning process and will be available on the BLM website at http://www.blm.gov/wo/st/en/prog/more/sagegrouse /wyoming.html and the Forest Service website at http://www.fs.usda.gov/detail/r4/home/?cid=STELPRD3815825

Sincerely,

Mary Jo Rugwell
Acting State Director

Nora Rasure
Regional Forester

Attachment 1

Protest Regulations

[CITE: 43CFR1610.5-2]

TITLE 43--PUBLIC LANDS: INTERIOR
CHAPTER II--BUREAU OF LAND MANAGEMENT, DEPARTMENT OF THE INTERIOR
PART 1600--PLANNING, PROGRAMMING, BUDGETING--Table of Contents
Subpart 1610--Resource Management Planning
Sec. 1610.5-2 Protest procedures.

(a) Any person who participated in the planning process and has an interest which is or may be adversely affected by the approval or amendment of a resource management plan may protest such approval or amendment. A protest may raise only those issues which were submitted for the record during the planning process.

(1) The protest shall be in writing and shall be filed with the Director. The protest shall be filed within 30 days of the date the Environmental Protection Agency published the notice of receipt of the final environmental impact statement containing the plan or amendment in the Federal Register. For an amendment not requiring the preparation of an environmental impact statement, the protest shall be filed within 30 days of the publication of the notice of its effective date.

(2) The protest shall contain:

(i) The name, mailing address, telephone number and interest of the person filing the protest;
(ii) A statement of the issue or issues being protested;
(iii) A statement of the part or parts of the plan or amendment being protested;
(iv) A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issue or issues were discussed for the record; and
(v) A concise statement explaining why the State Director's decision is believed to be wrong.

(3) The Director shall promptly render a decision on the protest.

(b) The decision shall be in writing and shall set forth the reasons for the decision. The decision shall be sent to the protesting party by certified mail, return receipt requested. The decision of the Director shall be the final decision of the Department of the Interior.

Wyoming Greater Sage-Grouse

PROPOSED
Land Use Plan Amendment

and

FINAL
Environmental Impact Statement

for the

Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs Field Offices

and

Bridger-Teton and Medicine Bow National Forests and Thunder Basin National Grassland

for

Public Lands Administered by the Bureau of Land Management Wyoming State Office

and

National Forest System Lands Administered by the Medicine Bow and Bridger-Teton National Forests

and

Thunder Basin National Grassland

May 2015

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WYOMING GREATER SAGE-GROUSE PROPOSED LAND USE PLAN AMENDMENTS AND FINAL ENVIRONMENTAL IMPACT STATEMENT

Lead Agency: U.S. Department of the Interior, Bureau of Land Management

Type of Action: Administrative

Jurisdiction: Portions of Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties

Abstract: The Wyoming Greater Sage-Grouse Proposed Land Use Plan (LUP) Amendments and Final Environmental Impact Statement (EIS) has been prepared by the U.S. Department of the Interior, Bureau of Land Management (BLM) and U.S. Department of Agriculture, Forest Service (Forest Service) with input from 26 cooperating agencies. This document is considering amendments to six BLM and three Forest Service LUPs to address management of Greater Sage-Grouse habitat in Wyoming. The final EIS describes and analyzes five alternatives for managing Greater Sage-Grouse habitat on approximately 16 million acres of BLM-administered and National Forest System lands and approximately 23 million acres of BLM-administered subsurface federal mineral estate. Alternative A is a continuation of current management (No Action Alternative); use of public lands and resources would continue to be managed under the current BLM and Forest Service LUPs, as amended. Alternative B is based on management actions from the Sage-Grouse National Technical Team's (NTT) *A Report on National Greater Sage-Grouse Conservation Measures*. Alternative C is based on management actions submitted by various groups during public scoping. Alternative D provides opportunities to use and develop the planning area while providing protection of Greater Sage-Grouse habitat using ideas provided by scoping comments and input from Cooperating Agencies involved in the alternatives development process. The Proposed LUP Amendments incorporates the guidance from the Washington Office Instruction Memorandum No. 2012-044 (12/27/2011) BLM National Greater Sage-Grouse Land Use Planning Strategy (WO IM No. 2012-044), the Wyoming Governor's Executive Order 2011-5 (WY EO 2011-5), and additional management based on the NTT recommendations. This alternative emphasizes management of Greater Sage-Grouse seasonal habitats and maintaining habitat connectivity to support population objectives set by the Wyoming Game and Fish Department (WGFD). Major planning issues addressed include energy and minerals, lands and realty (including rights-of-way), wildfire, vegetation management (including invasive species and conifer encroachment), livestock grazing, recreation, travel management, and socioeconomics.

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the United States (US) Department of the Interior (DOI), Bureau of Land Management (BLM) to develop and periodically revise or amend its resource management plans (RMPs), which guide management of BLM-administered lands. The National Forest Management Act of 1976 (NFMA) directs the US Department of Agriculture, Forest Service (Forest Service) to develop and periodically revise or amend its land and resource management plans (LRMPs), which guide management of National Forest System lands. These two agencies' plans will be referred to generically as land use plans (LUPs) throughout the remainder of this document.

The BLM and Forest Service Wyoming Greater Sage-Grouse (GRSG) Proposed Plan provides a layered management approach that offers the highest level of protection for GRSG in the most valuable habitat. Land use allocations in the Proposed Plan would limit or eliminate new surface disturbance in Priority Habitat Management Areas (PHMA), while minimizing disturbance in General Habitat Management Areas (GHMA).[1] In addition to establishing protective land use allocations, the Proposed Plan would implement a suite of management tools, such as disturbance limits, GRSG habitat objectives and monitoring, mitigation approaches, adaptive management triggers and responses, and other protective measures throughout the range. These overlapping and reinforcing conservation measures will work in concert to improve and restore GRSG habitat condition and provide consistency in how the BLM and Forest Service will manage activities in GRSG habitat in the planning area.

[1] In the Proposed LUPA and Final EIS, GRSG habitat nomenclature has been changed from Core Areas to Priority Habitat Management Areas (PHMA) and Non-Core Sage Grouse Habitat to General Habitat Management Areas (GHMA).

ES.1.1 Rationale for the Greater Sage-Grouse Planning Strategy and Land Use Plan Amendment

This land use plan amendment is the result of the March 2010 US Fish and Wildlife Service (USFWS) 12-Month Finding for Petitions to List the GRSG (*Centrocercus urophasianus*) as Threatened or Endangered (75 *Federal Register* 13910, March 23, 2010). In that finding, the USFWS concluded that GRSG was "warranted, but precluded" for listing as a threatened or endangered species. A "warranted, but precluded" determination is one of three results that may occur after a petition is filed by the public to list a species under the Endangered Species Act (ESA). This finding indicates that immediate publication of a proposed rule to list the species is precluded by higher-priority listing proposals; that is, a species should be listed based on the available science, but listing other species takes priority because they are more in need of protection.

The USFWS reviewed the status of and threats to the GRSG in relation to the five listing factors provided in Section 4(a)(1) of the ESA. Of the five listing factors reviewed, the USFWS determined that Factor A, "the present or threatened destruction, modification, or curtailment of the habitat or range of the GRSG," and Factor D, "the inadequacy of existing regulatory mechanisms," posed "a significant threat to the GRSG now and in the foreseeable future" (75 *Federal Register* 13910, March 23, 2010). The USFWS identified the principal regulatory mechanisms for the BLM and Forest Service as conservation measures in LUPs.

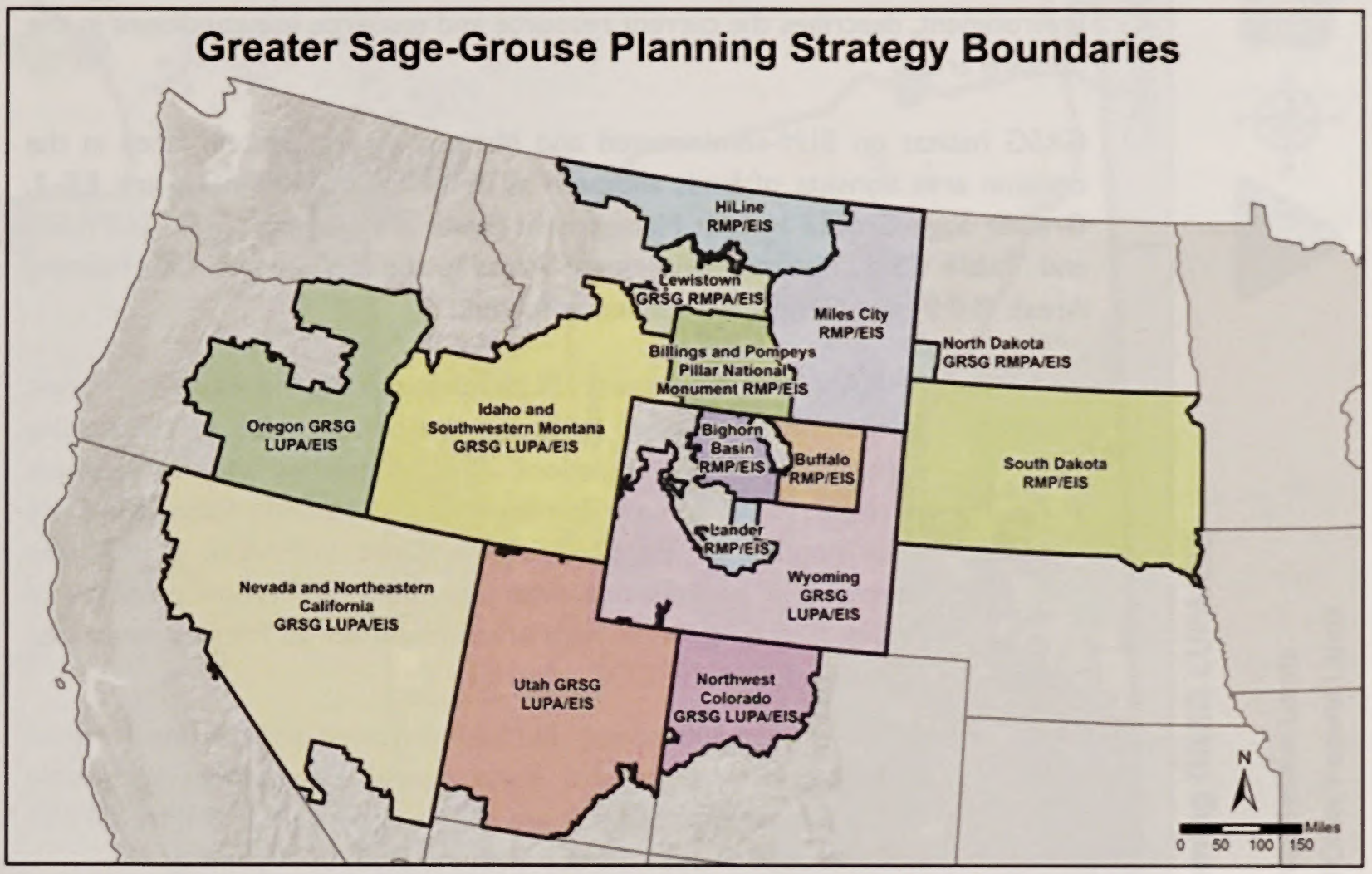
The Wyoming GRSG Land Use Plan Amendment (LUPA) is one of the 15 LUP revisions and amendments and environmental impact statements being prepared by the BLM and Forest Service as part of the National Greater Sage-Grouse Planning Strategy (BLM 2011).[2] These documents provide a set of management alternatives focused on specific conservation measures across the range of the GRSG (see **Figure ES-1**, Greater Sage-Grouse Planning Strategy Boundaries).

Science-based decision making and collaboration with state and local partners are fundamental to the National Greater Sage-Grouse Planning Strategy. The 15 GRSG LUP/EISs address threats to GRSG identified by state fish and wildlife agencies, the BLM National Technical Team, and the USFWS in the context of its listing decision and the Conservation Objectives Team (COT) report. The COT report was prepared by wildlife biologists from state and federal agencies and provides a blueprint for the overall conservation approach set forth in the BLM and Forest Service GRSG LUP/EISs (USFWS 2013).[3] Where consistent with conservation objectives, the GRSG LUP/EISs adopt unique state- and stakeholder-developed approaches and priorities. Additional science-based

[2] BLM (US Department of the Interior, Bureau of Land Management). 2011. Instruction Memorandum 2012-044, BLM National. Greater Sage-Grouse Land Use Planning Strategy. Washington, DC. December 27, 2011.
[3] USFWS (US Department of the Interior, Fish and Wildlife Service). 2013. Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report. USFWS, Denver, CO. February 2013.

reviews by the US Geological Survey and related scientific literature provided further guidance on specific issues that arose in developing the final BLM and Forest Service GRSG LUP/EISs. In addition, regular meetings with the Western Governors Association Sage-Grouse Task Force provided additional opportunities for coordination with member states.[4]

Figure ES-1



ES.1.2 Description of the Planning Area and Habitat Management Areas

The planning area is the geographic area within which the BLM and Forest Service will make decisions during this planning effort. The planning area boundary includes all lands regardless of jurisdiction. The Wyoming GRSG LUPA planning area covers 38,854,460 acres of federal, state, and private lands in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties in Wyoming. Of the total area, 15.8 million acres are BLM-administered and National Forest System federal surface/federal mineral estate

[4] The Western Governors Association Sage-Grouse Task Force works to identify and implement high priority conservation actions and integrate ongoing actions necessary to preclude the need for the GRSG to be listed under the ESA. The Task Force includes designees from the 11 western states where GRSG is found as well as representatives from USFWS, BLM, Natural Resources Conservation Service, Forest Service, United States Geological Survey, and Department of the Interior.

lands, and an additional 6.5 million acres are non-federal surface/federal mineral estate to be covered by LUPA decisions.

While the planning area consists of all lands regardless of ownership, decisions resulting from the Wyoming GRSG LUPA/EIS would apply only to BLM-administered and National Forest System lands, including surface and split-estate lands with BLM-administered subsurface mineral rights. **Chapter 3**, Affected Environment, describes the current resource and resource use conditions in the planning area.

GRSG habitat on BLM-administered and National Forest System lands in the decision area consists of lands allocated as PHMA and GHMA (**Figure ES-2**, Greater Sage-Grouse Habitat Management Areas – Wyoming GRGS LUPA/EIS and **Table ES-1**, Habitat Management Areas in the Wyoming GRSG Planning Area). PHMA and GHMA are defined as follows:

- PHMA (4,894,900 acres): BLM-administered and National Forest System lands identified as having the highest value to maintaining sustainable GRSG populations. The boundaries and management strategies for PHMA are derived from and generally follow the Core Area boundaries identified in the Draft LUPA/EIS. PHMA was identified in coordination with the State of Wyoming. Areas of PHMA largely coincide with areas identified as Priority Areas for Conservation in the COT report.
- GHMA (5,951,300 acres): BLM-administered and National Forest System lands that require some special management to sustain GRSG populations, but that are not as important as PHMA. GHMA was identified in coordination with the State of Wyoming.

The planning area includes other BLM-administered and National Forest System lands that are not allocated as habitat management areas for GRSG. These lands would be managed according to the existing, underlying land use plan for the area.

The Proposed Plan also identifies specific Sagebrush Focal Areas (SFAs) (1,196,000 acres), which are a subset of PHMA. The SFAs were derived from GRSG "stronghold" areas described in a USFWS memorandum to the BLM and Forest Service titled *Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes* (USFWS 2014). The memorandum and associated maps provided by the USFWS identify areas that represent recognized "strongholds" for GRSG that have been noted and referenced as having the highest densities of GRSG and other criteria important for the persistence of the species.

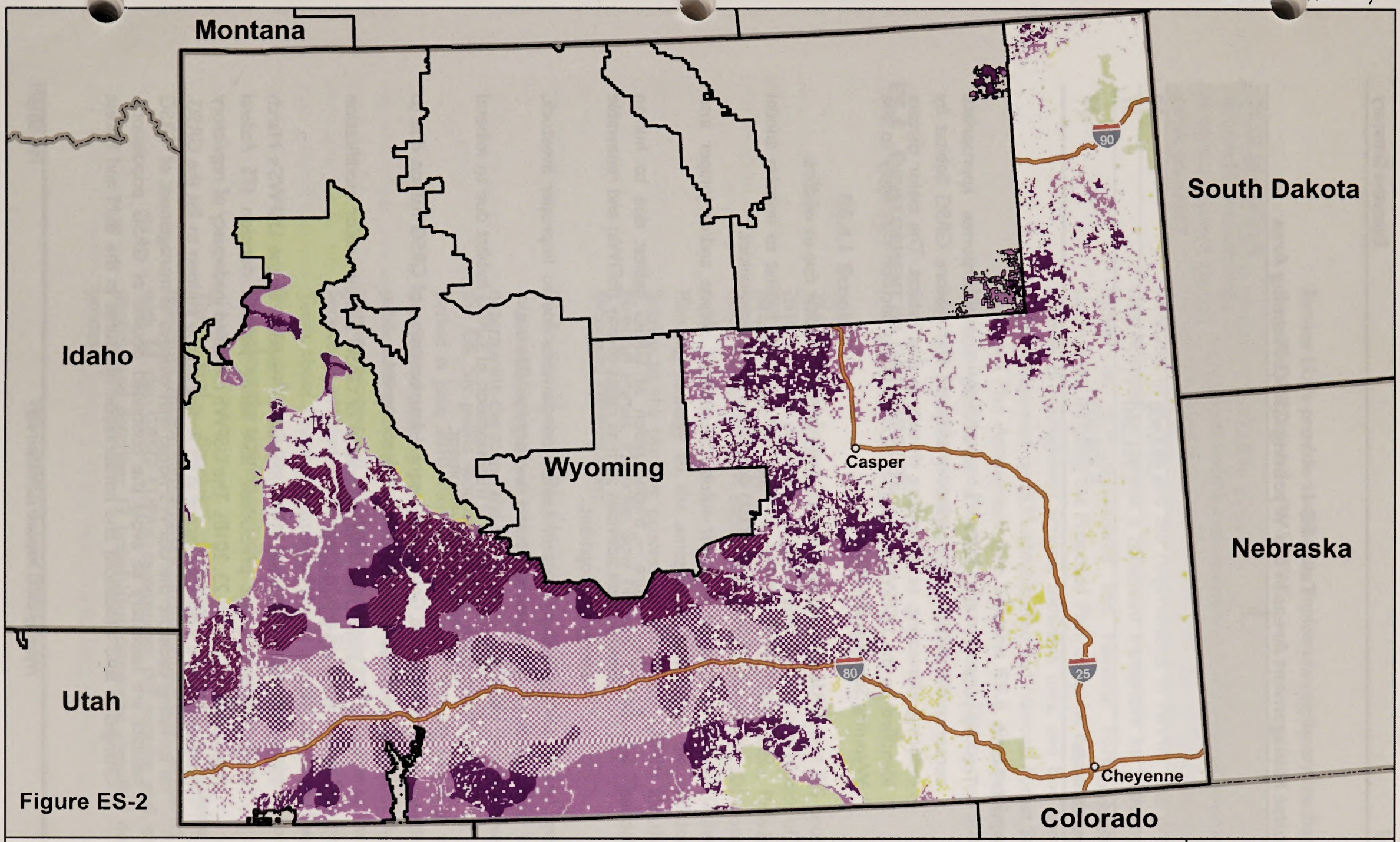


Figure ES-2

Greater Sage-Grouse Habitat Management Areas - Wyoming GRSG LUPA/EIS

- BLM/National Forest System Sagebrush Focal Areas
- BLM/National Forest System Priority Habitat Management Areas
- BLM/National Forest System General Habitat Management Areas
- Other BLM Lands
- Other National Forest System Lands
- Private, State, and Other Federal Lands
- EIS Boundary
- State Boundary

N W E S

0 15 30 60 Miles

Map Area



No warranty is made by the Bureau of Land Management (BLM) or the U.S. Forest Service (USFS). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

Table ES-1
Habitat Management Areas in the Wyoming GRSG Planning Area

Habitat Management Area	Acres of BLM-administered/National Forest System Lands	Percent of BLM-administered/National Forest System Lands in Planning Area
PHMA	4,894,900	30
GHMA	5,951,300	37
Other BLM-administered/ National Forest System lands	5,308,600	33

ES.2 Purpose and Need

The purpose for the LUPA is to identify and incorporate appropriate conservation measures to conserve, enhance, and restore GRSG habitat by reducing, eliminating, or minimizing threats to that habitat. The major threats identified by the USFWS in the March 2010 listing decision that apply to the Wyoming Sub-region include:

- Wildfire – loss of large areas of GRSG habitat due to wildfire.
- Invasive Species – conversion of GRSG habitat to invasive annual grass (e.g., cheatgrass) dominated plant communities.
- Conifer Invasion – encroachment of pinyon and/or juniper into GRSG habitat.
- Infrastructure – fragmentation of GRSG habitat due to human development activities such as rights-of-way (ROWs) and renewable energy development.
- Grazing – loss of habitat components due to improper livestock, wild horse and burro, and large wildlife use.
- Hard Rock Mining – fragmentation of GRSG habitat due to mineral exploration and development.
- Oil and Gas Development – fragmentation of GRSG habitat due to mineral exploration and development.
- Human Uses – fragmentation of GRSG habitat and/or modification of GRSG behavior.

This LUPA with associated EIS is needed to respond to the USFWS's March 2010 "warranted, but precluded" ESA listing petition decision (75 *Federal Register* 13910, March 23, 2010). The USFWS identified inadequacy of regulatory mechanisms as a significant factor in its finding on the petition to list the GRSG. In its listing decision, the USFWS noted that changes in management of GRSG habitats are necessary to avoid the continued decline of GRSG populations. Changes in land allocations and conservation measures in the BLM and Forest

Service LUPs provide a means to implement regulatory mechanisms to address the inadequacy identified by USFWS.

ES.3 Proposed Action

The proposed federal action is the Proposed Plan, which identifies resource management actions in accordance with the multiple-use and sustained-yield mandates of FLPMA and the requirements in NFMA. The proposed action is also intended to provide a consistent framework for managing GRSG and its habitat on BLM-administered and National Forest System lands. The alternatives, including the Proposed Plan, comprise desired future outcomes and a range of management actions, allowable uses, and land use allocations that guide management on BLM-administered and National Forest System lands. The Proposed Plan Amendment (see **Section ES.6**, Greater Sage-Grouse Habitat Management Proposed Plan and Environmental Effects), represents the agencies' approach for addressing the purpose and need.

ES.4 Development of the LUPA/EIS

ES.4.1 Scoping

The BLM and Forest Service initiated the LUPA and EIS process on May 28, 2010, with the publication in the *Federal Register* of a Notice of Intent to begin a planning effort for the Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs RMPs. A second NOI on December 9, 2011 opened the second public scoping period for the addition of the National Greater Sage-Grouse Planning Strategy to the amendment effort and the addition of the Forest Service to the planning process to amend the LRMPs for the Bridger-Teton National Forest, Medicine Bow National Forest, and Thunder Basin National Grassland Planning Units.

Publication of the NOIs initiated the scoping process and invited affected and interested agencies, organizations, and the general public to participate in determining the scope and issues to be addressed by alternatives and analyses in the EIS. Six public scoping meetings were conducted during the first scoping period in June 2010. Five additional public scoping meetings were held during the second scoping period in early 2012. The scoping meetings provided the public with an opportunity to learn and ask questions about the project and the planning process and to submit their issues and concerns to the BLM and Forest Service. In addition to members of the BLM and Forest Service Interdisciplinary Team, about 140 people attended the 11 scoping meetings. The BLM and Forest Service collected comments from the public during the scoping meetings and throughout the scoping periods.

The final Scoping Summary Report, available online at http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html, prepared in conjunction with all the GRSG LUPAs, summarizes the scoping and issue-identification process and describes 13 broad issue categories identified during the scoping process.

ES.4.2 Cooperating Agency Collaboration

Throughout this planning effort, the BLM and Forest Service have engaged with multiple federal, state, and local government agencies and Native American tribes. Consistent with the BLM Land Use Planning Handbook (H-1601-1) and FLPMA and the Forest Service Manual 1920 and NFMA, cooperating agencies share knowledge and resources to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks. A total of 46 agencies and tribes agreed to participate as cooperating agencies in the LUPA process. The BLM and Forest Service met with and provided relevant information to cooperating agencies throughout the planning process. For more information, see **Chapter 5**, Consultation and Coordination.

ES.4.3 Development of the Draft LUPA/EIS

Development of Management Alternatives

In accordance with NEPA and the CEQ implementing regulations (40 CFR 1500), the planning team considered public input and developed a reasonable range of alternatives for the Draft LUPA/EIS.

The planning team developed five unique alternatives, including one No Action Alternative and four action alternatives, which were subsequently analyzed in the Draft LUPA/EIS. Each of the preliminary action alternatives was designed to:

- Address the 13 range-wide GRSG planning issues
- Address the 26 planning issues raised specifically in scoping for this effort
- Fulfill the purpose and need for the LUPA
- Meet the multiple-use and sustained-yield mandates of FLPMA and requirements in NFMA
- Respond to USFWS-identified issues and threats to GRSG and its habitat, including specific threats identified in the COT report

Collectively, the four action alternatives (Alternatives B, C, D, and E) analyzed in the Draft LUPA/EIS offered a range of possible management approaches for responding to the purpose and need as well as the planning issues and concerns identified through public scoping. While the overarching goal of the long-term conservation of GRSG and its habitat is the same across alternatives, each alternative contains a discrete set of objectives and management actions, which if selected as the final plan, would constitute a unique LUPA.

Publication of Draft LUPA/EIS

Public Comment Period

The Notice of Availability (NOA) for the Wyoming GRSG Draft LUPA/EIS was published in the Federal Register on December 27, 2013, initiating the 90-day public comment period. The comment period ended on March 27, 2014. The

BLM and Forest Service held six public meetings in February 2014. Written public comments were reviewed and considered by the BLM and Forest Service.

Comment Analysis

During the public comment periods, the BLM and Forest Service received thousands of written comments by mail, email, and submissions at the public meetings. Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. Upon receipt, the BLM and Forest Service reviewed the comments, grouped similar substantive comments under an appropriate topic heading, and evaluated and wrote summary responses addressing the comment topics. The response indicated whether or not the commenters' points would result in new information or changes being included in the Final LUPA/EIS. In many circumstances, public comments prompted changes to the Draft LUPA/EIS. **Appendix O** provides a detailed description of the comment analysis methodology and an overview of the public comments received.

ES.5 LUPA/EIS Alternatives and Environmental Effects

ES.5.1 Alternative A

Under Alternative A, neither the BLM nor the Forest Service would develop new management actions to protect GRSG habitat. Management of existing threats to GRSG populations and habitat, such as infrastructure, invasive species, grazing, mineral development, and wildfire, would continue in accordance with existing land use planning documents.

ES.5.2 Alternative B

Alternative B is based on the conservation measures developed by the NTT planning effort in IM No. WO-2012-044. As directed in the IM, the conservation measures developed by the NTT must be considered and analyzed, as appropriate, through the land use planning process and NEPA by all BLM state and field offices that contain occupied GRSG habitat. Under this alternative, a surface disturbance cap of 3 percent per 640 acres is considered within GRSG priority habitat.

All GRSG priority habitat areas would be designated as GRSG conservation Areas of Critical Environmental Concern (ACECs)/Special Interest Areas (SIAs). Allotments not meeting standards due to livestock grazing in GRSG priority habitat would incorporate a light grazing management strategy utilizing a 20 to 30 percent forage allocation for livestock.

Alternative B would reduce surface disturbance and disruptive activities in priority GRSG habitat. The protection of priority sagebrush habitat could provide GRSG the undisturbed, contiguous habitat necessary for the species to maintain or improve population numbers. Management would close GRSG priority habitat to oil, gas, and CBNG leasing, wind energy, and other minerals. Additional management for livestock grazing could allow for greater achievement of Wyoming Standards for Rangeland Health or the Forest Service

equivalent and provide improved habitat for special status species, especially those that inhabit riparian and wetland areas. Larger lek buffers and restrictions to the density of disturbance for surface-disturbing activities to protect GRSG priority habitat would protect more land, especially sagebrush habitat, from surface-disturbing activities, habitat loss, and fragmentation.

ES.5.3 Alternative C

Alternative C is the most restrictive approach to GRSG conservation. This alternative emphasizes improvement and protection of habitat for GRSG and is applied to all occupied GRSG habitat. Alternative C would limit commodity development in areas of occupied GRSG habitat and would close or designate portions of the planning area to some land uses. Under this alternative, a surface disturbance cap of 3 percent per 640 acres is considered within GRSG priority habitat.

All GRSG priority habitat areas and Audubon Important Bird Areas would be designated as GRSG conservation ACECs/SIAs. Livestock grazing would be prohibited within GRSG priority habitat.

Alternative C would reduce surface disturbance and disruptive activities in priority GRSG habitat, and in some cases general habitat (oil, gas, CBNG, ROWs, wind). The protection of priority and general sagebrush habitat could provide GRSG the largest area of undisturbed, contiguous habitat necessary for the species to maintain or improve population numbers. Closing priority habitat to livestock grazing could allow for improved habitat. Larger lek buffers and restrictions to the density of disturbance for surface-disturbing activities to protect GRSG habitat would protect more land, especially sagebrush habitat, from surface-disturbing activities, habitat loss, and fragmentation. Overall, Alternative C would provide the greatest protection of sagebrush habitat among all the alternatives.

ES.5.4 Alternative D

This alternative increases the potential for development and resource use, with reduced GRSG habitat protections. Protective measures would be applied to GRSG habitat. Under this alternative, a surface disturbance cap of 9 percent per 640 acres is considered within GRSG core habitat.

Alternative D could have impacts from surface-disturbing activities that are similar to Alternative A. In some cases, such as ROWs and wind energy, Alternative D protects all core GRSG habitat. Other management could provide protection of GRSG core habitat from wind development by reducing habitat loss, fragmentation, and direct impacts from wind turbines and overhead structures. Impacts from surface-disturbing activities such as livestock grazing and other mineral development could lead to loss, alteration, and fragmentation of habitat and displacement of GRSG.

ES.5.5 Alternative E (Proposed Plan)

The Proposed Plan is a variation of the Preferred Alternative analyzed in the Draft LUPA/EIS. Alternative E generally increases conservation of physical, biological, and heritage and visual resources compared to current management. Alternative E also emphasizes moderate constraints on resource uses, while applying specific reclamation and mitigation requirements to reduce impacts on resource values. Alternative E limits motorized vehicle use to designated roads and trails, and vegetation resources would be managed to maintain contiguous blocks of native plant communities. Alternative E places additional stipulations on oil and gas-related surface disturbances within certain areas.

Alternative E identifies protective measures for GRSG habitat consistent with the State of Wyoming Core Area Strategy. Alternative E generally applies greater restrictions on surface disturbance and disruptive activities to protect sensitive wildlife habitats, including occupied GRSG leks, than Alternative A. Disturbance in PHMA under Alternative E would also be limited to 5 percent, subject to valid existing rights. The disturbance cap would apply to all anthropogenic disturbances and would be measured at project scales.

ES.6 Greater Sage-Grouse Habitat Management Proposed Plan and Environmental Effects

In consideration of public comments, best science, cooperating agency coordination, and internal review of the Draft LUPA/EIS, the BLM and Forest Service developed the Proposed Plan for Greater Sage-Grouse Habitat Management (Proposed Plan). The Proposed Plan represents the BLM and Forest Service's proposed approach for meeting the purpose and need consistent with the agencies' legal and policy mandates.

The BLM and Forest Service Proposed Plan addresses threats to GRSG and its habitat identified by the USFWS in the March 2010 listing decision that apply to the Wyoming GRSG planning area as well as threats described in the COT report. The Proposed Plan seeks to provide greater regulatory certainty for management actions intended to conserve the GRSG (see **Table ES-2**, Key Components of the Wyoming GRSG Proposed Plan Addressing COT Report Threats). In making its determination of whether the GRSG is warranted to be listed as threatened or endangered under the ESA, the USFWS will evaluate the degree to which the land use planning decisions proposed in this LUPA/EIS address threats to GRSG and its habitat.

The Proposed Plan would maintain and enhance GRSG populations and habitat. The Proposed Plan would apply management actions, subject to valid existing rights, to other uses and resources, such as:

- Establishing screening criteria and conditions for new anthropogenic activities in PHMA and GHMA designed to achieve net conservation gain

- Providing a framework for prioritizing areas in PHMA and GHMA for wildfire, invasive annual grass, and conifer treatments
- Reducing habitat disturbance and fragmentation through limitations on surface-disturbing activities
- Adapting to resource and use changes through monitoring and adaptive management

The Proposed Plan would also establish screening criteria and conditions for new anthropogenic activities to ensure a net conservation gain to GRSG in PHMA. The Proposed Plan would reduce habitat disturbance and fragmentation through limitations on surface-disturbing activities, while addressing changes in resource condition and use through monitoring and adaptive management.

The Proposed Plan is built upon the foundation for GRSG management established by and complementary to the Governor's Executive Order 2011-05, Greater Sage Grouse Core Area Protection (Core Area Strategy) (Wyoming Office of the Governor 2011), by establishing similar conservation measures and focusing restoration efforts in the same key areas most valuable to the GRSG.

For a full description of the Proposed Plan, see **Chapter 2**.

Table ES-2
Key Components of the Wyoming GRSG Proposed Plan Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Wyoming GRSG Proposed Plan
All Threats	• Implement the Adaptive Management Plan, which provides regulatory assurance that unintended negative impacts to GRSG habitat will be addressed before consequences become severe or irreversible. • PHMA: Require and ensure mitigation that provides a net conservation gain to GRSG. • Monitor implementation and effectiveness of conservation measures in GRSG habitats according to the Habitat Assessment Framework. • Apply Required Design Features (RDF) when authorizing actions in GRSG habitat. (BLM only) • Prioritize the leasing and development of fluid mineral resources outside GRSG habitat. (BLM only) • Incorporate RDFs as land use plan guidelines. (Forest Service only) • Work with the operator to locate fluid mineral development outside GRSG habitat. (Forest Service only)
All development threats, including mining, infrastructure, and energy development	• PHMA: Implement an anthropogenic disturbance cap of 5% at the project-area scale. • PHMA: Implement a density cap of an average of 1 energy and mining facility per 640 acres. • PHMA: Surface occupancy and surface-disturbing activities would be prohibited on or within a 0.6-mile radius of the perimeter of occupied

Table ES-2
Key Components of the Wyoming GRSG Proposed Plan Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Wyoming GRSG Proposed Plan
	GRSG leks. • GHMA: Surface occupancy and surface-disturbing activities would be prohibited on or within a 0.25-mile radius of the perimeter of occupied GRSG leks.
Energy Development—Fluid Minerals	• PHMA: Open to fluid mineral leasing subject to No Surface Occupancy (NSO) stipulation within 0.6 miles of an occupied lek, and Timing Limitation (TL) stipulation from March 15 to June 30. • GHMA: Open to fluid mineral leasing subject to NSO within 0.25 miles of an occupied lek and TL stipulations.
Energy Development—Wind Energy	• PHMA: Avoidance area (may be available for wind energy development with special stipulations)
Infrastructure – major Rights-of-Way (ROW)	• PHMA: Avoidance area (may be available for major ROWs with special stipulations)
Infrastructure – minor ROWs	• PHMA: Avoidance area (may be available for minor ROWs with special stipulations)
Mining—locatable minerals	• SFAs: 252,160 acres would be recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights. 894,060 acres would be considered for future recommendation for withdrawal from mineral entry, based on risk to GRSG and its habitat from conflicting locatable mineral potential and development.
Mining—coal	• PHMA is essential habitat for GRSG for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).
Livestock Grazing	• Prioritize the review and processing of grazing permits/leases in SFAs followed by PHMA. (BLM only) • Adjust grazing management to move towards desired habitat conditions consistent with ecological site capability. (Forest Service only) • The NEPA analysis for renewals and modifications of grazing permits/leases will include specific management thresholds, based on the GRSG Habitat Objectives Table, Land Health Standards, and ecological site potential, to allow adjustments to grazing that have already been subjected to NEPA analysis. (BLM only) • Consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions. (Forest Service only) • Prioritize field checks in SFAs followed by PHMA to ensure compliance with the terms and conditions of grazing permits. (BLM only)
Free-Roaming Equid Management	• PHMA: Review and consider amending BLM Herd Management Area Plans to incorporate GRSG habitat objectives and management considerations for all BLM herd management areas.

Table ES-2
Key Components of the Wyoming GRSG Proposed Plan Addressing COT Report Threats

Threats to GRSG and its Habitat (from COT Report)	Key Component of the Wyoming GRSG Proposed Plan
Range Management Structures	• Allow range improvements which do not impact GRSG, or which provide a conservation benefit to GRSG such as fences for protecting important seasonal habitats.
Recreation	• PHMA: Do not construct new recreation facilities.
Fire	• PHMA: Fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems and enhancing and protecting future sagebrush ecosystems. (BLM only) • Protection of GRSG habitat should receive high consideration, along with other high values, when positioning resources. (Forest Service only)
Nonnative, Invasive Plants Species	• Integrated vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species. Manage weed treatments to maintain and improve GRSG habitat.
Sagebrush Removal	• PHMA: Maintain a minimum of 70 percent of lands capable of producing sagebrush with 10 to 30 percent sagebrush canopy cover. • All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives for GRSG.
Pinyon and/or Juniper Expansion	• Remove conifers encroaching into sagebrush habitats, prioritizing occupied GRSG habitat.
Agricultural Conversion and Ex-Urban Development	• Retain the majority of PHMA in federal management.

ES.7 SUMMARY

Since the release of the Draft Wyoming GRSG LUPA/EIS, the BLM and Forest Service have continued to work closely with a broad range of governmental partners, including the United States Department of Agriculture Natural Resources Conservation Service, the USFWS and US Geological Survey in DOI, Indian tribes, governors, state agencies, and county commissioners. Through this cooperation, the BLM and Forest Service have developed the Proposed Plan that, in accordance with applicable law, achieves the long-term conservation of GRSG and its habitat..

Conservation of the GRSG is a large-scale challenge that requires a landscape-scale solution that spans 11 western states. The Wyoming GRSG LUPA/EIS achieves the consistent, range-wide conservation objectives as outlined below. Additionally, the Wyoming GRSG LUPA/EIS aligns with the State of Wyoming's priorities and land management approaches consistent with conservation of GRSG.

Minimize additional surface disturbance. The most effective way to conserve the GRSG is to protect existing, intact habitat. The BLM and Forest Service aim to reduce habitat fragmentation and protect key habitat areas. The Wyoming GRSG LUPA/EIS minimizes surface disturbance on over 10 million acres of BLM-administered and National Forest System lands by allocating lands as PHMA and GHMA with decisions that aim to conserve GRSG habitat.

Disturbance in PHMA under the Proposed Plan would be limited to 5 percent, subject to valid existing rights. The disturbance cap would apply to all anthropogenic disturbances and would be measured at project scales. In the event disturbance exceeds 5 percent, new authorizations would be subject to the disturbance management protocol.

The BLM and Forest Service also updated the Proposed Plan to reflect new GRSG state conservation strategies, including recent State Executive Orders. The objectives of these documents are consistent with the State of Wyoming's Core Area Strategy, which is designed to protect GRSG and its habitat within core areas using a suite of tools and mechanisms that work in concert to conserve GRSG by reducing habitat loss and fragmentation through lek buffers, disturbance limits, excluding activities, and a sophisticated mapping utility to monitor the amount and density of disturbance.

Improve habitat condition. While restoring lost sagebrush habitat can be very difficult in the short term, particularly in the most arid areas, it is often possible to enhance habitat quality through purposeful management. The Wyoming GRSG LUPA/EIS commits to management actions that are necessary to achieve science-based vegetation and GRSG habitat management objectives established in the Proposed Plan.

For mitigation, the BLM would coordinate with the Wyoming Sage Grouse Implementation Team for application of the "avoid, minimize, compensate" process to ensure anthropogenic activities result in a net conservation gain for GRSG habitat. The Proposed Plan also includes a process for monitoring and adapting to changing conditions on the landscape. Using monitoring data for population and sagebrush canopy cover, the adaptive management strategy would apply more restrictive management where there is a consistent downward trend. The cause of the downward trend (e.g., anthropogenic disturbance, fire, disease, etc.) would be identified through monitoring data.

Reduce threat of rangeland fire to sage-grouse and sagebrush habitat. Rangeland fire can destroy sagebrush habitat and lead to the conversion of previously healthy habitat into landscapes dominated by invasive species. The Wyoming GRSG LUPA/EIS incorporates Secretarial Order 3336 and sets forth protocols to improve the BLM and Forest Service's ability to protect GRSG habitat from damaging wildfire.

The Proposed Plan also incorporates sagebrush ecosystem resistance and resilience concepts to prioritize landscape-level habitat restoration, fire operations, and post-fire recovery projects. The Proposed Plan would provide the planning-level framework for more detailed implementation-level assessments that address the threat of fire, invasive annual grasses, and conifer encroachment in GRSG habitat throughout the planning area.

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CHAPTER 1—INTRODUCTION

1.1 INTRODUCTION

The U.S. Department of the Interior, Bureau of Land Management (BLM) Wyoming State Office and the U.S. Department of Agriculture, Forest Service (Forest Service) Regional Office have initiated a planning effort to prepare Land Use Plan (LUP) amendments with an associated environmental impact statement (EIS) for the Casper, Green River (covering the Rock Springs Field Office), Kemmerer, Newcastle, Pinedale, and Rawlins Resource Management Plans (RMP); and the Bridger-Teton National Forest (BTNF), Medicine Bow National Forest (MBNF), and Thunder Basin National Grassland (TBNG) Land and Resource Management Plans (LRMP). This final EIS describes and analyzes a reasonable range of alternatives for the public lands and resources administered by the BLM in the six field offices and the National Forest System lands and resources administered by the Forest Service in the three planning units. This analysis will aid the BLM decision-maker in formulating amended RMPs and the Forest Service decision-maker in formulating amended LRMPs and activity-level decisions for the planning area. These two agencies' plans, RMPs and LRMPs, are generically referred to as LUPs throughout the remainder of this document. Acreage figures throughout this final EIS are rounded to the nearest ten unless otherwise stated.

In 2010, the State of Wyoming developed a "Core Population Area" strategy to weave the many on-going efforts to conserve the Greater Sage-Grouse (*Centrocercus urophasianus)* in Wyoming into a statewide Strategy. New science, information and data continue to emerge regarding "Core Population Areas" and the habitat and behaviors of the Greater Sage-Grouse, which led the Governor's Sage-grouse Implementation Team to re-evaluate the original "core population areas" and protective stipulations for Greater Sage-Grouse. It is the policy of BLM Wyoming to manage Greater Sage-Grouse seasonal habitat and maintain connectivity in identified areas in support of the population management objectives set by the State of Wyoming. This guidance is consistent with guidelines and recommendations provided for in the Wyoming Governor's Sage-Grouse Implementation Team's Core Population Area Strategy and the most recent Wyoming Governor's Executive Order (EO) 2011-5 (WY EO 2011-5).

1.2 CHANGES BETWEEN THE DRAFT EIS AND THE FINAL EIS

As a result of public comments, best science, cooperating agency coordination, and internal review of the Draft LUP Amendments/Draft EIS, the BLM's and Forest Service's Preferred Alternative, identified as Alternative E in the Draft LUP Amendments/Draft EIS, has been modified and is now the Proposed LUP Amendments for managing BLM-administered lands and National Forest System lands within the Wyoming Greater Sage-Grouse planning area. The Proposed LUP Amendments focus on addressing public comments, while continuing to meet the BLM's and Forest Service's legal and regulatory mandates.

Changes to the alternatives between the draft EIS and final EIS:

- Chapter 2 has been reorganized for consistency between all sub-regional Greater Sage-Grouse LUP Amendments/Final EIS.
- The Greater Sage-Grouse adaptive management plan has been further defined in Section 2.7.1, Adaptive Management.

- The Greater Sage-Grouse monitoring strategy has been further defined in Section 2.7.2, Monitoring for the Greater Sage-Grouse Planning Strategy, and Appendix D of the final EIS.

- The Greater Sage-Grouse mitigation strategy has been further defined in Section 2.7.3, Regional Mitigation, and Appendix D of the final EIS.

- The Forest Service Proposed LUP Amendments are now a stand-alone proposed plan in the final EIS.

- In the Proposed LUP Amendments (previously identified as Alt E) in the final EIS, the following areas that were identified as general habitat in Alternatives B, C, D are managed as priority-core or priority-connectivity:

    - 32,756.82 acres of priority-connectivity on the BTNF
    - 63,195.32 acres of priority-core on the BTNF
    - 54,252.59 acres of priority-core on TBNG
    - 3,335.85 acres that were identified as core habitat in Alternatives B, C, and D are managed as Sagebrush Focal Areas (SFA) on the BTNF.

- Sagebrush Focal Areas—These areas have been identified in the Proposed LUP Amendments based on recommendations in a U.S. Fish and Wildlife Service (USFWS) memorandum, and are proposed to be managed as PHMAs with the following additional management: Recommended for withdrawal; NSO without waiver, exception, or modification for fluid mineral leasing; and prioritized for management and conservation actions including, but not limited to review of livestock grazing permits/leases. Alternative E (now the Proposed LUP Amendments) identified areas recommended for withdrawal, NSO, and/or prioritization for grazing, and analyzed the impacts of those decisions.

- CEA WAFWA analysis—A quantitative cumulative effects analysis for Greater Sage-Grouse was included in the Final EIS. This analysis was completed to analyze the effects of management actions on Greater Sage-Grouse at a biologically significant scale which as determined to be at the WAFWA Management Zone. The Draft EIS, in Chapter 4, included a qualitative analysis and identified that a quantitative analysis would be completed for the Final EIS at the WAFWA Management Zone.

- Net Conservation Gain—The net conservation gain strategy is in response to the overall landscape-scale goal which is to enhance, conserve, and restore Greater Sage-Grouse and its habitat. All of the action alternatives provided management actions to meet the landscape-scale goal.

Habitat Delineation

The BLM and Forest Service have identified Greater Sage-Grouse habitat in coordination with the State of Wyoming. This habitat falls into one of the following categories:

- Core Habitat Areas—The boundaries of the Greater Sage-Grouse areas that were identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations per version 3 of the State of Wyoming EO Greater Sage-Grouse Core Area of Protection (WY EO 2010-4) (Wyoming Office of the Governor 2010). These areas include breeding, late brood-rearing, winter concentration areas and migration or connectivity corridors and correspond to Washington Office Instruction Memorandum (IM) No. WO-2012-043 as Preliminary Priority Habitat.

- Key Habitat Areas—The boundaries of the Greater Sage-Grouse areas that were identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations per version 2 of the State of Wyoming EO Greater Sage-Grouse Core Area of Protection (WY EO 2008-2) (Wyoming Office of the Governor 2008). These areas include breeding, late brood-rearing, winter concentration areas and migration or connectivity corridors and correspond to Washington Office IM No. WO-2012-043 as Preliminary Priority Habitat. Key Habitat Areas were replaced by Core Habitat Areas.

- Connectivity Areas—Greater Sage-Grouse Connectivity Habitat (as defined in the WY EO 2011-5) is one of two components of Priority Habitat Management Areas. Connectivity Habitats are state-designated areas identified as the most important for Greater Sage-Grouse and include known, migration or connectivity corridors. It does not include breeding, late brood-rearing, or winter concentration areas.

- Non-Core Sage-Grouse Habitat—Areas of occupied seasonal or year-round habitat not located within Core or Connectivity Habitat. These areas correspond to Preliminary General Habitat as defined in Washington Office IM No. WO-2012-043.

The Conservation Objectives Team (COT) report identified PACs based upon the data provided by State Fish and Game agencies. The State of Wyoming manages sage-grouse and sage-grouse habitats consistent with Governor's EO 2011-05, *Greater Sage-Grouse Core Area Protection* (Core Area Strategy), which establishes Core Areas.

In October 2014, the BLM updated the habitat category delineation. In the Proposed LUP Amendments/Final EIS Greater Sage-Grouse habitat nomenclature has been changed from Core and Connectivity Areas to priority habitat management area (PHMA) and Non-Core Sage-Grouse Habitat to general habitat management area (GHMA).

1.2.2 Sagebrush Focal Areas

On October 27, 2014, the U.S. Fish and Wildlife Service (USFWS) provided the BLM/Forest Service a memorandum titled "*Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes.*" The memorandum and associated maps provided by the USFWS identify areas that represent recognized "strongholds" for Greater Sage-Grouse that have been noted and referenced as having the highest densities of Greater Sage-Grouse and other criteria important for the persistence of the species (USFWS maps). Within these areas, the BLM/Forest Service identified SFA (Map 2-36), which are PHMAs with the following additional management:

1) Recommended for withdrawal from the General Mining Law of 1872, subject to valid existing rights, the lands shown on Map 2-23 (252,160 acres)

2) Prioritized for management and conservation actions in these areas, including but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).

On November 21, 2014 the U.S. Geological Survey (USGS) published "*Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review" (Open File Report 2014-1239)*. The USGS review provided a compilation and summary of published scientific studies that evaluate the influence of anthropogenic activities and infrastructure on Greater Sage-Grouse populations. The BLM has reviewed this information and examined how lek buffer-distances were addressed through land use allocations and other management actions in the Draft Wyoming Greater Sage-Grouse LUP Amendments. The State of Wyoming's Core Area Strategy is designed to protect birds and habitat within core areas using a suite of

tools and mechanisms that work in concert to conserve sage-grouse by reducing habitat loss and fragmentation through lek buffers, disturbance limits, excluded activities, and a sophisticated mapping utility to monitor the amount and density of disturbance. The USFWS has informed the BLM that the combined effect of these overlapping and reinforcing mechanisms give USFWS confidence that the lek buffer distances in the Core Area Strategy will be protective of breeding sage-grouse.

1.3 DESCRIPTION OF THE PLANNING AREA

The planning area for the Greater Sage-Grouse LUP Amendments consists of lands managed by the Wyoming BLM Casper, Kemmerer, Newcastle, Pinedale, Rawlins, and Rock Springs field offices, and the Forest Service BTNF, MBNF, and TBNG Planning Units (Map 1-1), and includes all lands and federal mineral estate managed by the BLM and the Forest Service within these areas. The planning area encompasses approximately 16 million acres of public surface land administered by the BLM and the Forest Service (Map 1-2), and approximately 23 million acres of federal mineral estate in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties in Wyoming (Map 1-3). Of the 23 million acres of federal mineral estate, approximately 7 million acres are split estate. Table 1-1 provides a summary of land and mineral ownership and administrative jurisdictions within the planning area. All of the lands in the planning units and field offices are reflected in this table and included in the amendment. Specific information regarding amounts and locations of Greater Sage-Grouse habitat can be found in Chapter 3.

Table 1-1. Land and Mineral Ownership and Administrative Jurisdictions within the Planning Area

Jurisdiction	Acres[1]		
	PHMA	GHMA	Total
Total land surface area in the planning area (all ownership)	10,034,910	16,752,270	38,854,460
Areas the Wyoming Greater Sage-Grouse LUP Amendments decisions will cover:			
Federal land/federal minerals[2]	4,899,020	6,160,160	15,813,030
Federal land/nonfederal minerals[3]	125,210	220,290	360,560
Nonfederal land/federal minerals[4]	1,716,960	3,564,750	6,540,190
Total BLM-administered federal land surface and National Forest System lands to be covered by LUP decisions	**5,033,240**	**6,372,900**	**16,154,740**
Total federal mineral estate to be covered by LUP decisions	**6,992,690**	**10,193,790**	**22,999,790**
Areas the Wyoming Greater Sage-Grouse LUP Amendments decisions will *not* cover:			
Private or state land/private or state minerals[5]	2,952,860	6,401,130	15,265,380

Jurisdiction	Acres[1]

[1] Because of land surface and mineral ownership overlaps and administrative responsibility overlaps, acreage figures for different jurisdictions do not add up to the total acreage.
[2] Where the federal land surface and federal mineral estate are both administered by the BLM or the Forest Service, LUP decisions would apply to both the land surface and the mineral estate.
[3] Where the federal land surface is administered by the BLM or the Forest Service, and the minerals are privately or state owned, LUP decisions would apply only to BLM/Forest Service-administered federal land surface and only to the extent allowed by law. Although surface management decisions may affect the timing and location of development, surface management decisions cannot preclude development of the non-federally owned minerals. The LUP decisions for mineral management would not apply to the non-federal mineral estate. Anticipated surface and mineral management actions and their direct, indirect, and cumulative impacts (cumulative impacts to the extent that they affect resource management decisions) are included/disclosed in the analyses.
[4] Where the land surface is privately owned or owned by the State of Wyoming, and the minerals are federally owned (i.e., split estate), the RMP decisions would apply to BLM-administered federal mineral estate and, to varying degrees, the surface estate. RMP decisions would only pertain to the state owned and privately owned land surface to the extent allowed by law and to the extent that the impacts were the result of the federal action. BLM would work with the private/state surface owners to honor their wishes to the extent allowed by law. Anticipated surface and mineral management actions and their direct, indirect, and cumulative impacts (cumulative impacts to the extent that they affect resource management decisions) are included/disclosed in the analyses.
[5] The LUP Amendments will not include any management decisions that are applicable to areas where the land surface and minerals are privately owned or owned by the State of Wyoming. However, anticipated impacts that might affect LUP decisions on these lands are included in the cumulative impact analysis.

The National Environmental Policy Act of 1969 (NEPA) requires federal agencies to consider environmental consequences in their planning and decision-making processes. NEPA requires that an EIS be prepared for any federal action that may significantly affect the quality of the human environment. RMPs and LRMPs are accompanied by EISs.

The analysis in this final EIS considers a comprehensive range of alternatives that provide for various levels of resource protection and uses. The EIS analyzes the potential environmental consequences of implementing each management alternative and the potential land allocation/resource use conflicts.

1.4 Purpose and Need for the Land Use Plan Amendments

The BLM and the Forest Service are preparing LUP amendments with associated EISs for LUPs containing Greater Sage-Grouse habitat that are not currently undergoing amendment or revision. Other BLM Wyoming LUPs currently undergoing revision are the Buffalo, Big Horn, Lander and Rock Springs RMPs. This effort responds to the recent "warranted, but precluded" Endangered Species Act listing petition decision from the USFWS (75 Fed. Reg. 13910, March 23, 2010). Nationwide, approximately 52% of sagebrush habitat is on BLM-administered land; the Forest Service has management authority for 8% of sagebrush habitat. Changes in management of Greater Sage-Grouse habitat are necessary to avoid the continued decline of populations that are anticipated across the species' range. These plan amendments will focus on areas affected by threats to Greater Sage-Grouse habitat identified by the USFWS in the March 2010 listing decision.

The purpose for the LUP amendments is for identification and incorporation of appropriate Greater Sage-Grouse conservation measures into the plan. In compliance with the Washington Office Instruction Memorandum No. 2012-044 (12/27/2011) BLM National Greater Sage-Grouse Land Use Planning Strategy (IM No. WO-2012-044), the measures to be considered include appropriate conservation measures developed by the National Technical Team (NTT). The BLM will consider such measures in the context of its multiple-use mandate under the Federal Land Policy and Management Act (FLPMA) and incorporate measures that will help conserve, enhance, and/or restore Greater Sage-Grouse habitat by reducing, eliminating, or minimizing threats to that habitat.

The BLM and Forest Service intend to issue separate Records of Decision (ROD) for the LUP amendments of each agency to be finalized by August, 2015, and expect that they will offer sufficient evidence for the USFWS to consider a determination that listing of the Greater Sage-Grouse as threatened or endangered under the Endangered Species Act is not warranted.

Decision to be Made: The BLM and the Forest Service will decide whether, and if required, how to amend the six existing RMPs and the three existing LRMPs, to address management of Greater Sage-Grouse habitat.

1.5 READER'S GUIDE

This section briefly describes the organization of this document (the chapter-by-chapter content) and provides an overview of the EIS process.

1.5.1 Reader's Guide to This Document

Federal regulations implementing NEPA dictate much of the organization of this final EIS. These regulations are found in Title 40 Code of Federal Regulations (CFR) §1500–1508.

This final EIS contains the following major chapter headings and information:

Table of Contents—Presents the content of the document with page references and lists of maps, figures, and appendices.

Chapter 1, Introduction—Presents an introduction to the final EIS; the purpose and need to which BLM and the Forest Service are responding; an overview of the BLM and the Forest Service planning processes; statutes (laws), limitations, and guidelines to which the BLM and the Forest Service must adhere in preparing the LUP amendments; and the relationship of this final EIS to other plans.

Chapter 2, Description of the Alternatives—Describes the No Action Alternative and how all the action alternatives were developed, management guidance common to all alternatives, and alternatives considered but eliminated from further consideration. It also presents specific plan-level resource goals, objectives, and management actions proposed for each alternative, as well as a comparative summary of impacts. The alternatives present a reasonable range of reasonable alternatives based on new information, guidance, laws and policy, and scientific knowledge.

Chapter 3, Affected Environment—Describes the planning area and the existing environmental conditions that would be affected by the alternatives presented in Chapter 2.

Chapter 4, Environmental Consequences—Describes the impacts of each management alternative, including direct, indirect, and cumulative impacts. Management actions presented in Chapter 2 are analyzed to determine their impact on the individual resource programs included in Chapter 4. Some management actions result in impacts to resource values and resource uses, while others do not. In cases in which a particular management action does not result in an impact, there is no discussion of that action in the analysis.

Chapter 5, Consultation and Coordination—Describes the EIS scoping process and other past and planned agency consultation and public involvement activities. This chapter presents a list of agencies, organizations, and individuals to whom this final EIS was sent, along with a list of preparers that includes the names and qualifications of the persons responsible for preparing this final EIS.

List of Acronyms—Presents the acronyms used in the document and their meanings.

Glossary—Presents an alphabetized list of definitions of selected terms used in this final EIS.

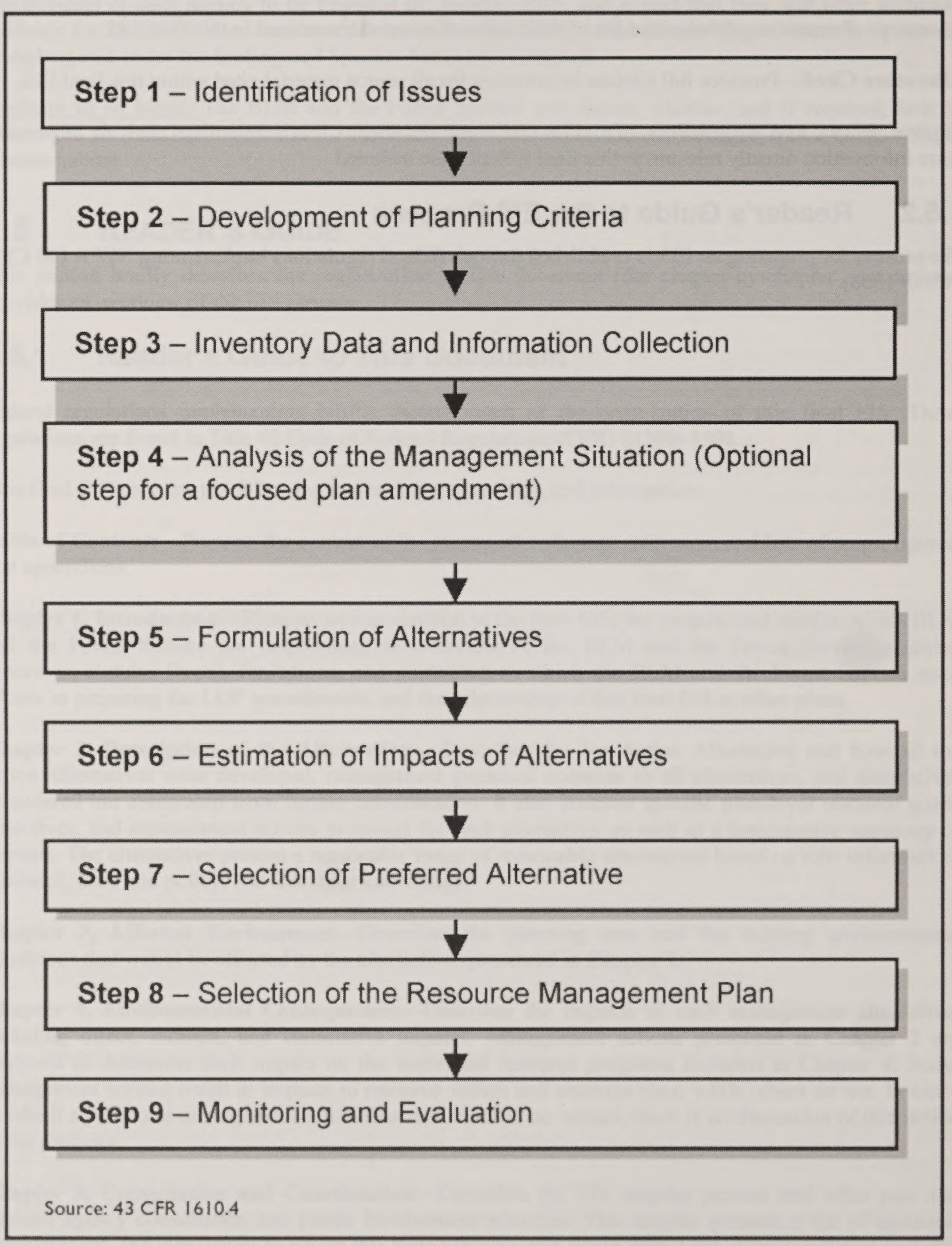
Literature Cited—Provides full citation information for all source material cited within this final EIS.

Figures, Maps, and Appendices—Provides additional documents that substantiate analysis or provide other information directly relevant to this final EIS are also included.

1.5.2 Reader's Guide to the EIS Process

The process for preparing an EIS is established through federal regulations implementing NEPA (40 CFR §1500–1508).

Figure 1-1. Nine Step Planning Process



The major steps in the EIS process are described below.

Notice of Intent (NOI)—The BLM published an NOI in the *Federal Register* on May 28, 2010, to announce its intention of amending the six BLM RMPs. On December 9, 2011, a NOI was published in the *Federal Register* to initiate the BLM/Forest Service Greater Sage-Grouse Planning Strategy across 10 western states, including California, Idaho, Nevada, Oregon and Southwest Montana in the Great Basin Region and North Dakota, Northwest Colorado, Montana, South Dakota, and Wyoming in the Rocky Mountain Region. On February 10, 2012 BLM published a Notice of Correction that changed the names of the regions that are coordinating the EISs and supplemental EISs, and added 11 Forest Service LRMPs to the project. The Forest Service published a NOI on March 2, 2012 to ensure all stakeholders interested in the Forest Service activities were aware of the NOI published by the BLM and were provided a complete list of potentially impacted forests and grasslands. This NOI increased the number of Forest Service LRMPs to 20.

Scoping Period—The scoping period was initiated with the publication of the NOI on May 28, 2010. Although the 30-day scoping period ended on June 28, 2010, scoping comments were accepted for consideration in the Draft RMP Amendments through August 30, 2010. A total of six public scoping meetings were conducted during the scoping period. A second scoping period was initiated on December 9, 2011. It was extended through the Notice of Correction published February 12, 2012 and ended on March 23, 2012. This scoping period initiated the BLM/Forest Service Greater Sage-Grouse Planning Strategy across ten western states in the Rocky Mountain Region. It also included the BTNF, MBNF, and the TBNG into the BLM's original six RMP Greater Sage-Grouse amendment process, initiated in 2010. Five additional public scoping meetings were held during this scoping period.

Draft EIS—The draft EIS considered public and agency comments received during the scoping process, provided a description of the alternatives developed from the issues and concerns raised during the scoping process, described the affected environment, and assessed the potential effects of implementing the alternatives.

Comment Period and Public Hearings—The BLM and Forest Service provided the public with 90 days from the date of publication of the Notice of Availability (NOA) for the Wyoming Greater Sage-Grouse Draft LUP Amendments/Draft EIS to review the document and submit comments. The NOA was published in the *Federal Register* on December 27, 2013. The 90-day public comment period officially ended on March 27, 2014. Any letters received after the closing date were accepted and also addressed during preparation of the Wyoming Greater Sage-Grouse Proposed LUP Amendments/Final EIS.

A total of 22,877 letters were received: 22,869 were sent by e-mail and 14 were submitted in hardcopy format or sent by mail. Of the total letters received, 22,624 of them were identified as being form letters. Form letters are described as letters containing identical text submitted by more than five individuals.

Final EIS (this document)—The final EIS assesses, considers, and responds to public and agency comments received on the draft EIS. A NOA for the final EIS was published in the *Federal Register*. The BLM/Forest Service will accept protests regarding the Proposed LUP Amendments/Final EIS for 30 days after it is published. A joint agency response will be provided to those who file for administrative review of the proposed decision(s). All protests will be resolved before finalizing the separate BLM and the Forest Service RODs.

ROD and Approved LUP Amendments—The ROD/Approved LUP Amendments is a separate and concise public record that details the final agency action and links the decisions to the analysis presented in the EIS. It describes how the environmental impacts and other factors were considered in the decision-making process. This document also links management decisions to the analysis presented in the EIS and

describes how environmental impacts and other factors were considered in the decision-making process. The BLM and the Forest Service will develop an implementation plan for the decisions in the ROD.

1.6 NATIONAL GREATER SAGE-GROUSE PLANNING STRATEGY

On December 9, 2011, an NOI was published in the Federal Register to initiate the BLM/Forest Service Greater Sage-Grouse Planning Strategy across ten western states, including California, Idaho, Nevada, Oregon, Utah, and Southwest Montana in the Great Basin Region and North Dakota, Northwest Colorado, Montana, South Dakota, and Wyoming in the Rocky Mountain Region. The Proposed LUP Amendments/Final EIS is one of 15 separate EISs that are currently being conducted to analyze and incorporate specific conservation measures across the range of the Greater Sage-Grouse, consistent with National BLM and the Forest Service policy.

On December 27, 2011, the BLM Washington Office released IM No. WO-2012-044, which directed BLM State Offices across the Greater Sage-Grouse range to consider all applicable conservation measures when revising or amending its RMPs in Greater Sage-Grouse habitat, including appropriate measures developed by the Sage-grouse National Technical Team (NTT) and presented in the December 2011 NTT Report entitled "A Report on National Greater Sage-Grouse Conservation Measures." The National Policy Team created the NTT in August of 2011 specifically to develop conservation measures based on the best available science.

Along with the reasonable, applicable measures that were outlined in the NTT Report, planning efforts associated with this National Greater Sage-Grouse Planning Strategy will also analyze reasonable conservation measures that were submitted to the BLM and the Forest Service from various state governments and from citizens during the public scoping process. It is the goal of the BLM and the Forest Service to make a final decision on these plans by August 2015, so that adequate regulatory mechanisms are incorporated in place before the USFWS makes a listing decision in 2015.

The Western Association of Fish and Wildlife Agencies (WAFWA) produced a complete conservation assessment for Greater Sage-Grouse and its habitat in 2002. In 2006, WAFWA established seven sage-grouse Management Zones which are based on populations within floristic provinces (detailed description in Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats [Connelly et al. 2004]). The planning decisions/conservation measures in this strategy are intended to address the long-term population trends in each of the seven Management Zones (Map 1-4). The National BLM/Forest Service Greater Sage-Grouse Planning Strategy is to maintain and enhance populations and distribution of Greater Sage-Grouse by protecting and improving sagebrush habitat and ecosystems that sustain these populations. The overall objective of the WAFWA range-wide Strategy is to produce and maintain neutral or positive trends in populations and to maintain or increase the distribution of sage-grouse in each Management Zone.

The Management Zones include:

Management Zone I: Great Plains Management Zone (GPMZ)

- Includes lands in the states and provinces of Montana, North Dakota, South Dakota, Wyoming, Alberta, and Saskatchewan.

Management Zone II: Wyoming Basin Management Zone (WBMZ)

- Includes lands in the states of Colorado, Idaho, Utah, and Wyoming.

Management Zone III: Southern Great Basin Management Zone (SGBMZ)

- Includes lands in the states of California, Nevada, and Utah.

Management Zone IV: Snake River Plain Management Zone (SRPMZ)

- Includes lands in the states of Idaho, Nevada, Oregon, and Utah.

Management Zone V: Northern Great Basin Management Zone (NGBMZ)

- Includes lands in the states of California, Nevada, and Oregon.

Management Zone VI: Columbia Basin Management Zone (CBMZ)

- Includes only lands in the state of Washington.

Management Zone VII: Colorado Plateau Management Zone (CPMZ)

- Includes lands in the states of Colorado and Utah and considers Greater and Gunnison Sage-Grouse.

A Greater Sage-Grouse COT composed of State and USFWS representatives was created to develop range-wide conservation objectives for the sage-grouse. The COT created the Conservation Objectives Report (2013), which is composed of reasonable objectives, based upon the best scientific and commercial data, for the conservation and survival of Greater Sage-Grouse. The Conservation Objectives Report defines the degree to which threats need to be reduced or ameliorated to conserve sage-grouse, so that it is no longer in danger of extinction or likely to become in danger of extinction in the foreseeable future.

Table 1-2. Threats by Management Zone and Population

Population	Threats[1]												
	Isolated/Small Size	Sagebrush Elimination	Agricultural Conversion	Fire	Conifers	Weeds/Annual Grasses	Energy	Mining	Infrastructure	Grazing	Free-Roaming Equids	Recreation	Urbanization
Management Zone I: Great Plains													
Powder River Basin (Wyoming)	N	L	N	L	L	Y	Y	Y	Y	Y	N	Y	L
Management Zone II: Wyoming Basin													
Jackson Hole (Wyoming)	Y	L	N	L	L	Y	N	N	N	N	N	Y	L
Wyoming Basin (Wyoming portion)	N	L	N	L	L	L	Y	L	Y	Y	L	Y	L

Population	Threats[1]												
Laramie (Wyoming, Colorado)	Y	N	N	Y	Y	Y	Y	U	Y	Y	N	Y	Y
N. Park (Wyoming Basin in Colorado)	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y

Source: USFWS 2013.
[1]Threats are characterized as: Y=threat is present and widespread, L=threat present but localized, N=threat is not known to be present, and U=unknown.

Because the BLM and the Forest Service administer a large portion of sage-grouse habitat within the affected states, changes in BLM and Forest Service management of sage-grouse habitat are anticipated to have a beneficial impact on existing sage-grouse populations and could reduce the need to list the species as threatened or endangered under the Endangered Species Act.

While energy development has been identified as the primary threat to the Greater Sage-Grouse within its eastern range, this area is not immune to the threat of wildfire. Within the Rocky Mountain Region, wildfire was identified by the Conservation Objectives Team Final Report (2013) as a present and widespread threat in seven of thirteen priority areas of conservation (PACs) and as a present but localized threat in the remaining PACs. While fire is a naturally occurring disturbance in the sagebrush steppe, the incursion of non-native annual grasses is facilitating an increase in mean fire frequency which can preclude the opportunity for sagebrush to become re-established. The Proposed LUP Amendments includes requirements (referred to as Greater Sage-Grouse Wildfire and Invasive Species Habitat Assessment in appendices in draft documents) that landscape scale Fire and Invasives Assessments be completed and updated regularly to more accurately define specific areas to be treated to address threats to sagebrush steppe habitat. Within the Rocky Mountain Region, assessments have not yet been completed but will be scheduled based on the need to identify and address potential threats. Additionally, the Secretary of the Interior issued Secretarial Order 3336 on January 5, 2015 which establishes the protection, conservation, and restoration of "the health of the sagebrush steppe ecosystem and, in particular, Greater Sage-Grouse habitat, while maintaining safe and efficient operations as a critical fire management priority for the Department." The Secretarial Order will result in a final report of activities to be implemented prior to the 2016 Western fire season. This will include prioritization and allocation of fire resources and the integration of emerging science, enhancing existing tools to implement the Proposed LUP Amendments and improving the ability to protect sagebrush-steppe from damaging wildfires.

1.6.1 Greater Sage-Grouse Conservation Objectives: Priority Areas for Conservation and How They Correlate with Priority and General Habitat Management Areas

In 2012, the Director of the USFWS asked the COT, consisting of state and USFWS representatives, to produce recommendations regarding the degree to which the threats need to be reduced or ameliorated to conserve Greater Sage-Grouse so that it would no longer be in danger of extinction or likely to become in danger of extinction in the foreseeable future. The COT Report (USFWS 2013a) provides objectives based upon the best scientific and commercial data available at the time of its release. The BLM/Forest Service planning decisions analyzed in the LUP/EISs are intended to ameliorate threats identified in the

COT Report and to reverse the trends in habitat condition. The COT Report can be viewed online at the following address:

http://www.fws.gov/mountain-prairie/species/birds/sagegrouse/COT/COT-Report-with-Dear-Interested-Reader-Letter.pdf.

The highest level objective in the COT Report is identified as meeting the objectives of WAFWA's 2006 Greater Sage-Grouse Comprehensive Strategy of "reversing negative population trends and achieving a neutral or positive population trend."

The COT Report provides a WAFWA Management Zone and Population Risk Assessment. The report identifies localized threats from sagebrush elimination, fire, conifer encroachment, weed and annual grass invasion, mining, free-roaming wild horses and burros, urbanization, and widespread threats from energy development, infrastructure, grazing, and recreation (USFWS 2013a, p. 18) (Table 1-2).

Key areas across the landscape that are considered "necessary to maintain redundant, representative, and resilient populations" are identified within the COT Report. The USFWS in concert with the respective state wildlife management agencies identified these key areas as Priority Areas for Conservation (PAC).

Within the planning area, the PACs consist of a total 1,915,990 acres. Under the Proposed LUP Amendments, the PACs are comprised of 1,914,830 acres of PHMA managed by the BLM/Forest Service, 590 acres of GHMA managed by the BLM/Forest Service, and 570 acres of non-habitat managed by the BLM/Forest Service.

1.7 PLANNING PROCESS

Once finalized, the LUP amendments will prescribe land allocations and future management direction for BLM-administered lands within the planning area for Greater Sage-Grouse habitat management. Future BLM permitted activities and/or projects must conform to LUP decisions, and any additional NEPA documents will be tiered to the LUP amendments and EIS or result in additional plan amendments.

1.7.1 Bureau of Land Management Planning

The BLM is directed by the FLPMA to plan for and manage "public lands." As defined by the Act and as applicable here, public lands are those federally owned lands, and any interest in lands (e.g., federally owned mineral estate), that are administered by the BLM.

The process for developing, approving, maintaining, and amending or revising RMPs was initiated under the authority of FLPMA Section 202(a). BLM's regulations under 43 CFR §1610 require BLM to use NEPA processes in preparing the plan so that the plan selected is based on informed decision-making and public involvement. The process is guided by BLM planning regulations in 43 CFR §1600 and the Council on Environmental Quality (CEQ) regulations in 40 CFR §1500.

The pre-planning phase of the BLM planning process consists of (1) compiling and reviewing the current laws, regulations, policies, Presidential executive orders, and directives pertaining to the planning area and (2) developing any needed State Director's guidance specific to the process and planning effort for the planning area.

The hierarchy of documents that BLM decision-makers consider for planning and project implementation is—

- **Land Use Plans.** The highest level of decision-making specific to land use is the RMP. RMPs generally make land allocations and provide goals and objectives for managing specific areas of land. They provide the framework for managing all natural resources under BLM authority for the planning area. Plan decisions are based on a public NEPA disclosure process, usually an EIS.

- **Activity Plans.** Mid-level decisions are provided in activity plans. These plans contain more detailed management decisions than do RMPs. Activity plans address management of specific programs or areas. Examples include allotment management plans, recreation area management plans, and habitat management plans. An activity plan usually selects and applies best management practices to meet LUP objectives. Decisions that cover major (often geographically widespread) proposals lead to coordinated activity plans that cover all programs in an integrated manner. Activity plans can be assessed through either an EIS or an environmental assessment (EA) level of NEPA analysis.

- **Project Plans.** The BLM analyzes individual projects proposed in a specific location for localized or site-specific effects. For example, the BLM would evaluate a range improvement proposal with a site-specific environmental analysis including NEPA, Endangered Species Act (ESA) consultation, and National Historic Preservation Act (NHPA) consultation.

1.7.2 Forest Service Planning

The 1976 National Forest Management Act (NFMA), Forest Service Manuals (FSM) 1950, 1920, and Forest Service NEPA Regulations (36 CFR 220) direct the Forest Service in implementing NEPA into their planning processes.

The highest level of decision-making specific to National Forest and National Grassland management is the LRMP. LRMPs generally make land allocations and provide goals and objectives for managing specific areas of land. They provide the framework for managing all natural resources under Forest Service authority for the planning area. Plan decisions are based on a public NEPA disclosure process, which is usually an EIS. The process of amending a LRMP is outlined in 36 CFR 219. The current version of this regulation states that plan amendments that were initiated before May 9, 2015 may be developed in conformance with the provisions of the prior planning regulation. Therefore, the LRMP amendments in this document were developed according to direction in the 1982 version of the CFR 219.

The process of amending a LRMP is outlined in 36 CFR 219. The current version of this regulation states that plan amendments that were initiated before May 9, 2015, may be developed in conformance with the provisions of the prior planning regulation. Therefore, the LRMP amendments in this document were developed according to direction in the 1982 version of the CFR 25 219. A LRMP includes plan components, proposed and possible actions, the monitoring program, and maps. The objectives of LRMPs are:

1. Establishment of Forest-wide or Grassland-wide Multiple Use Goals and Objectives, including Desired Conditions

2. Establishment of Forest-wide or Grassland-wide Management Requirements, including standards and guidelines

3. Establishment of Management Area direction, including prescriptions and associated standards and guidelines

4. Identification of lands suitable or unsuitable for various uses

5. Recommendations for any Wilderness, Wild-Scenic, or other designated areas

6. Establishment of requirements for monitoring and evaluation.

Plan Components include Desired Conditions, Objectives, Standards, and Guidelines. Plan components may be developed to apply to either the entire administrative unit or management areas within the unit.

The Forest Service Proposed LUP Amendments for Greater Sage-Grouse described in this analysis include Desired Conditions, Standards, Guidelines, and Objectives. The Proposed LUP Amendments do not propose to revise the Suitability of Areas nor does it identify any additional Special Areas for the Forest Service LUPs.

1. **Desired conditions** are a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.

2. **Objectives** are concise, measurable, and time-specific statements of a desired rate of progress toward a desired condition or conditions. Objectives describe the focus of management during the next fifteen years and may set priorities, with an expectation that high priority work would be completed first, depending on funding. Objectives should be based on reasonably foreseeable budgets. Failure to achieve objectives by the time specified in the plan does not require a plan amendment or revision.

3. **Standards** and **Guidelines** provide guidance and information for carrying out projects and activities to help achieve objectives and desired conditions. Standards and guidelines do not force action; rather they only apply when action is being taken. They are constraints on project and activity decision-making and are based on matters within the Forest Service's control. Both Standards and Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. A **Standard** is a mandatory constraint. A **Guideline** is a constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. A Responsible Official may adjust guidelines when it is necessary to address effectively specific circumstances. In such a case, the Responsible Official should:

    a. Document a clear rationale for adjusting the guidelines in both the project analysis and decision documents

    b. Recognize the purposes for which the guideline was developed and provide assurance that the project or activity will still achieve those purposes (FSH 1909.12, Chapter 10).

Proposed and Possible Actions may be displayed in an appendix in the land management plan (16 USC 1604(f)(2)) and may include those actions the Forest Service unit expects to provide. Proposed and possible actions may be presented in a brief summary of the types of projects that may occur in the plan decade to maintain or move toward the desired conditions. Proposed and possible actions should not speculate about the specific amount, quantities, frequency, or magnitude of actions during the plan decade. A plan amendment is not required to change the proposed and possible actions.

A **Monitoring Program** for the plan area (36 CFR 219.6(b)) establishes monitoring questions and associated performance measures. Monitoring questions must link to one or more desired condition, objective, or guideline. Not every desired condition, objective, and guideline must be associated with a monitoring question.

Once finalized, the LRMP amendments described in this analysis will prescribe land allocations and future management direction for National Forest System lands within the planning area for Greater Sage-Grouse habitat management. In addition to amending affected Forest Service LRMPs, the decision resulting from this analysis will also amend any existing Forest Service oil and gas leasing availability decisions to incorporate Greater Sage-Grouse conservation measures as required lease stipulations. Throughout this EIS, a reference to amending Forest Service LRMPs also refers to amending any existing oil and gas leasing decisions to incorporate those measures into responses to the BLM for consent to lease individual parcels of National Forest System lands. Forest Service permitted activities and/or projects must conform to LUP decisions, Project or activity-level decisions to implement the LRMP must follow the NEPA process as outlined in 36 CFR 220.

To reduce confusion for the reader, throughout this document the term LUP is used to represent both a BLM resource management plan and a Forest Service land and resource management plan.

1.8 PLANNING ISSUES

Planning issues are determined from demands, concerns, conflicts, or problems concerning planned or current use or management of public lands and resources. Issues express concerns, opportunities, conflicts, and problems associated with the planned or current management of public lands. Issues also reflect new data, new or revised policies, and changes in resource uses affecting the planning area. Management concerns are topics or points of dispute that involve a resource management activity or land use. While some concerns overlap issues, a management concern is generally more important to an individual or group, as opposed to a planning issue that has more widespread point of conflict. These issues are usually expressed in terms of the potential adverse consequences or effects that a particular land or resource use may have on other land or resources used or valued by another entity or for another purpose.

1.8.1 Issues Addressed

Initially, BLM identified the following three planning issues to be considered within the RMP Amendments for the six field offices:

- Consistency of existing LUP decisions with State of WY EO 2011-5.
- Consistency of sage-grouse policy with other LUP resource decisions and the need to revise the RMPs to address inconsistencies.
- What is the amendment process that revises LUP decisions to best protect the Greater Sage-Grouse, incorporate IM No. WY-2012-019, while minimizing changes to other resource management decisions?

After the initial scoping for the project, the Forest Service LRMPs were added to the planning effort for a region-wide sage-grouse planning effort, and a second scoping period was opened. Additional preliminary planning issues were identified by the BLM and the Forest Service, including the following:

- Lands addressed in the LUP Amendments will be public lands (including surface-estate and split estate lands) managed by the BLM and the Forest Service, respectively, in Greater Sage-Grouse habitat. Any decisions in the LUP Amendments will apply only to federal lands administered by either the BLM or the Forest Service.

- The BLM and the Forest Service will consider a range of reasonable alternatives, including appropriate management prescriptions that focus on the relative values of resources while contributing to the conservation of the Greater Sage-Grouse and Greater Sage-Grouse habitat.

- The BLM and the Forest Service will endeavor to use current scientific information, research, technologies, and results of inventory, monitoring, and coordination to determine appropriate local and regional management strategies that will enhance or restore Greater Sage-Grouse habitat.

- The BLM and the Forest Service will consult with Federally Recognized Native American Tribes to identify sites, areas, and objects important to their cultural and religious heritage within Greater Sage-Grouse habitat.

- The BLM and the Forest Service will coordinate and communicate with state, local, and tribal governments. These efforts are to ensure that BLM and the Forest Service; consider provisions of pertinent plans, seek to resolve inconsistencies, and provide ample opportunities for state, local, and tribal governments to comment on the development of amendments or revisions.

- The BLM and the Forest Service will develop vegetation management objectives, including noxious weeds and invasive species (including identification of desired future conditions for specific areas), within Greater Sage-Grouse habitat.

- The LUP Amendments will be based on the principles of Adaptive Management.

- Reasonable Foreseeable Development Scenarios and planning for Fluid Minerals will follow the BLM Handbook H–1624–1 and current manual guidance for fluid minerals (oil and gas and coalbed methane) and geothermal resources. For National Forest System lands, the Forest Service will use applicable and relevant policy and procedures.

- The LUP Amendments will be developed using an interdisciplinary approach. This approach will prepare reasonable foreseeable development scenarios, identify alternative, and analyze resource impacts, including cumulative impacts to natural and cultural resources, as well as the social and economic environment.

Additional planning issues were identified during the two public scoping periods and from information gathered in analyzing the existing management situation in the planning area. Based on the input of the public, other government agencies, and BLM, issues were identified for the following resource areas:

Air Quality

Impacts from climate change should be included in the analysis of the LUP Amendments.

General (Process/Policy)

The BLM should consider all IMs related to Greater Sage-Grouse in the development of the RMP amendments, such as IM No. WY-2010-022 (Managing Structures for the Safety of Sage-grouse, Sharp-

tailed grouse, and Lesser Prairie-chicken), IM No. WO-2010-017 (Gunnison and Greater Sage-Grouse Management Considerations for Energy Development (Supplement to National Sage-Grouse Habitat Conservation Strategy)), IM No. WO-2012-044, and IM No. WY-2012-019 (Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands Including the Federal Mineral Estate). BLM will use the best available science and specific documents in the development of the LUP amendments, such as BLM/Forest Service policy documents, other state and federal environmental policies, and scientific journal articles. Including terminology definitions, such as "disruptive activity" and "suitable habitat." Consider a range of management approaches for Greater Sage-Grouse habitat protection. Follow NEPA regulations and BLM/Forest Service policy in developing the LUP Amendments and how the Wyoming planning effort will be incorporated at the regional level.

Lands and Realty

Consider how Greater Sage-Grouse management would impact management or construction of rights-of-ways (ROWs) including corridors.

Livestock Grazing

Consider both the continuation and elimination of livestock grazing practices. Include the impacts of livestock grazing on Greater Sage-Grouse habitat, such as the spread of weeds, soil loss, and range deterioration. Coordinate with livestock grazing permittees in the LUP amendment process and to incorporate livestock grazing management as an important part of the LUP Amendments. In addition, water, riparian, and wetland comments associated with livestock grazing were submitted.

Minerals and Energy

Minerals and energy issues include considering the benefits and detriments to Greater Sage-Grouse from wind and conventional energy development on BLM-administered lands and National Forest System lands. Analyze impacts from mineral development on Greater Sage-Grouse and their habitat, such as lek and nest abandonment, habitat fragmentation, and overall habitat loss and the efforts operators are making to support Greater Sage-Grouse and associated habitat. Consider the effects IM No. WY-2012-019 could have on mineral development, such as allowing for valid existing rights for lease development, buffer distances, reclamation requirements, well density, and regulations on development in non-core areas. Additional issues were raised about management on split estate lands, cumulative impacts of development on Greater Sage-Grouse habitat, particularly for oil and gas, and impacts of wind development, as well as specific implementation-level recommendations. There were concerns with how the BLM and the Forest Service will manage unique energy production techniques including, but not limited to, oil shale extraction and wind development in Greater Sage-Grouse habitat. Development in the Powder River and Hoback Basins were of particular concern.

Recreation

Consider the level of recreation that could be allowed to reduce or prevent impacts to Greater Sage-Grouse habitat. Managing recreation use is not a major component of the new Wyoming sage-grouse management policy. Through the regulation of recreation special use permits, and the implementation of transportation management plans, some recreation uses may be more regulated in Greater Sage-Grouse habitat than previous management prescriptions. However, this will not account for potential disturbances to breeding or nesting birds, since most recreation activities are not restricted by timing limitations.

Socioeconomic

Consider the adverse economic impacts from the Wyoming sage-grouse management policy and the need for socioeconomic analysis of the impacts from the policy.

Special Management Area Designations

Core areas could be considered for protection through designations of Areas of Critical Environmental Concern (ACEC) and the LUP Amendments should consider ACECs to protect Greater Sage-Grouse.

Special Status Species (Including Greater Sage-Grouse)

Issues regarding special status species primarily addressed Greater Sage-Grouse and sage-grouse core areas. Focusing Greater Sage-Grouse management on only core habitat areas could lessen protections in general habitat, which could be detrimental to the species. Management should address all threats to Greater Sage-Grouse, including predation by other species. Use valid sage-grouse data and ensure that sufficient data has been collected to make management decisions within the LUP Amendments. Try to find a balance of managing Greater Sage-Grouse populations effectively while much of the BLM-administered lands and National Forest System lands are already leased for mineral development.

Greater buffer distances, additional seasonal stipulations, and expansion or reduction of core areas are management actions that should be considered in the LUP amendments. Reasons for Greater Sage-Grouse population declines and threats to the species, including intensive resource uses and development, human disturbance, predation, habitat fragmentation, and habitat loss are issues to be included in the document. Consideration of specific Greater Sage-Grouse habitat requirements, such as migration corridors and lek, nesting, winter, and brood-rearing habitat, were described and addressed in the comments.

Other concerns included management recommendations for particular components of habitat as well as discussion of specific potential habitat areas. Areas include: Thunder Basin National Grassland; Upper Snake River Basin; Greys River Ranger District of the Bridger-Teton National Forest; Upper Green River Core population and the Gros Ventre River Valley; Bacon Ridge/Breakneck Flats sage-grouse winter use areas; Upper Green River Core population and the Hoback Basin; connectivity of sagebrush habitat along the Wyoming-Idaho State line near Crow, Stump, and Spring Creeks; and habitat connectivity with occupied habitat in Star Valley and Southeast Idaho.

Travel and Access Management

Consider vehicle use and roads within core habitat, as well as potential for reduced access to BLM-administered lands and National Forest System lands from the new management for Greater Sage-Grouses.

Vegetation

Consider vegetation treatments and the benefits of those treatments on sagebrush habitat, and the threat of cheatgrass and other invasive species on sagebrush habitat.

Wildland Fire Management

Wildland fire (planned and unplanned) may be considered for use in enhancing sagebrush habitat.

Wildlife and Fisheries

Consider the health and management of sagebrush habitat, restoration of sagebrush and opportunities to restore degraded Greater Sage-Grouse habitat as potential mitigation measures for project proponents, and current and future effectiveness of the restoration of sagebrush habitat due to low precipitation, cheatgrass invasion, and wildland fire. Consider the current conditions of sagebrush habitat and threats to the health of the habitat, such as fragmentation from mineral development and other uses, livestock grazing, and the proliferation of invasive species. Address the management of the entire sagebrush ecosystem, as other sagebrush obligate species' populations are also in decline. Recommendations included specific design features to protect Greater Sage-Grouse from predators. In addition, comments were received on potential conflicts between prairie dog and Greater Sage-Grouse management.

The full range of issues raised during the public scoping period can be viewed in the Wyoming Greater Sage-Grouse RMP Amendments Scoping Report and the National Greater Sage-Grouse Planning Strategy Land Use Plan Amendments and Environmental Impact Statements Scoping Summary Report, available on the project website: http://www.blm.gov/wy/st/en/programs/Planning/amendments.html.

1.9 PLANNING CRITERIA

Planning criteria are the constraints or ground rules that are developed to guide and direct the planning amendment. Planning criteria are based on laws and regulations, guidance provided by the BLM Wyoming State Director and Forest Service Regional Foresters, results of consultation and coordination with the public, other agencies and governmental entities, and Federally Recognized Native American Tribes; analysis of information pertinent to the planning area, public input, and professional judgment. The planning criteria focus on the development of management alternatives, analysis of the related effects, and selection of the Preferred Alternative and the Proposed LUP amendments. Additional planning criteria may be identified as the planning process progresses. General planning criteria include the following:

1. The amendment will be in compliance with FLPMA, NFMA, and all other applicable laws, regulations, and policies.

2. Impacts from the alternatives will be analyzed in accordance with regulations at 43 CFR 1610, 36 CFR 219, and 40 CFR 1500.

3. Lands covered in the LUP Amendments will be public land managed by BLM within the designated planning areas. No decisions will be made relative to non-BLM or Forest Service administered lands.

4. The LUP Amendments will recognize the state's responsibility and authority to manage wildlife population number and the BLM manages habitat, a coordinated effort is necessary to meet both agency's objectives.

5. The LUP Amendments will incorporate management decisions brought forward from existing planning documents whenever possible. Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by the LUP Amendments.

6. The planning team will work cooperatively and collaboratively with cooperating agencies and all other interested groups, agencies, and individuals.

7. The BLM, Forest Service, and cooperating agencies will jointly develop alternatives for resolution of common resource management issues and management concerns.

8. GIS and metadata information will meet Federal Geographic Data Committee (FGDC) standards, as required by EO 12906. All other applicable BLM and Forest Service data standards will be followed.

9. All proposed management actions will be based on the best available, current, scientific information, research and technology, and inventory and monitoring information.

10. The LUP Amendments may include adaptive management criteria and protocol to address with future issues.

11. The planning process may use mitigation to develop management options and alternatives. The EIS will analyze the impacts, and is part of the planning criteria for developing the options and alternatives and for determining mitigation requirements.

12. The BLM and the Forest Service will utilize the Western Association of Fish and Wildlife Agencies (WAFWA) *Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats* (Connelly, *et al.* 2004), and any other appropriate resources, to identify Greater Sage-Grouse habitat requirements and best management practices.

13. The approved RMP amendments will be consistent with the BLM's National Sage-Grouse Conservation Strategy.

14. The approved RMP amendments will comply with NEPA and Council on Environmental Quality regulations at Department of the Interior (DOI) regulations at 43 CFR part 46 and 43 CFR part 1600; the 2008 BLM NEPA Handbook (H–1790–1), and all other applicable BLM policies and guidance.

15. The approved LRMP amendments will comply with NFMA, Forest Service NEPA regulations found at 36 CFR 220, and Forest Service Handbook 1909.15, Regulations of the Secretary of Agriculture at 36 CFR part 219, and FSM 1920 and FSH 1909.12.

16. The LUP Amendments will be limited to making land use planning decisions specific to the conservation of Greater Sage-Grouse habitat.

17. The BLM and the Forest Service will consider allocative and/or prescriptive standards to conserve Greater Sage-Grouse habitat, as well as objectives and management actions to restore, enhance, and improve Greater Sage-Grouse habitat.

18. The BLM and the Forest Service will use a collaborative and multi-jurisdictional approach, where appropriate, to determine the desired future condition of public lands and National Forest System lands for the conservation of Greater Sage-Grouse and their habitat.

19. As described by law and policy, the BLM will strive to ensure that conservation measures are as consistent as possible with other planning jurisdictions within the planning area boundaries.

20. The BLM and the Forest Service will address socioeconomic impacts of the alternatives. Socio-economic analysis will use an accepted input-output quantitative model such as IMPLAN or RIMSII, and/or JEDI for renewable energy analysis.

21. Management of Greater Sage-Grouse habitat that intersects with Wilderness Study Areas (WSAs) on public lands administered by the BLM will be guided by the BLM Manual 6330, Management of WSAs. Land use allocations made for WSAs must be consistent with BLM Manual 6330 and with other laws, regulations, and policies related to WSA management.

22. The BLM and the Forest Service will consult with Federally Recognized Native American Tribes to identify sites, areas, and objects important to their cultural and religious heritage within Greater Sage-Grouse habitat.

23. The BLM and the Forest Service will coordinate and communicate with state, local, and tribal governments. These efforts are to ensure that BLM and the Forest Service; consider provisions of pertinent plans, seek to resolve inconsistencies, and provide ample opportunities for state, local, and tribal governments to comment on the development of amendments or revisions. The most current approved BLM and Forest Service corporate spatial data will be supported by current metadata and will be used to ascertain Greater Sage-Grouse habitat extent and quality. Data will be consistent with the principles of the Information Quality Act of 2000.

24. Wyoming Game and Fish agencies' Greater Sage-Grouse data and expertise will be utilized in making management decisions.

25. For BLM-administered lands, all activities and uses within Greater Sage-Grouse habitat will conform to existing land health standards. Standards and guidelines (S&G) for livestock grazing and other programs that have developed guidelines will be applicable to all alternatives for BLM lands.

Planning Criteria for Specific Situations

Criteria for Hydrocarbon Potential

Areas of hydrocarbon occurrence have been identified within the planning area. These areas have been classified into having high, moderate and low potential for occurrence and development of hydrocarbons. These areas were identified by using available geologic information and past production information from the mineral industry. Estimates of reasonably foreseeable oil and gas (including coalbed natural gas) exploration and development activity have been developed from analysis of past activity and production. These estimates have been used to aid in the analysis of environmental consequences. Because these occurrence and development potential classifications and production estimates are general, they are appropriate for planning purposes but are not appropriate for predicting future specific activity or the specific locations of new discoveries.

Criteria for Withdrawals and Classifications

Under Section 202(d) of FLPMA, any classification of BLM-administered public lands or National Forest System lands is subject to periodic review to determine whether it is serving its intended purpose and is still needed. These reviews will be conducted during the planning effort and may result in modification or termination of classifications. During the planning effort, the need for new withdrawals may also be identified.

Withdrawals Under Other Agency Jurisdiction. The withdrawal review requirement of FLPMA has not yet been completed on those federal lands withdrawn for purposes of other federal agencies (i.e., those lands under the jurisdiction of the Department of Defense or BOR). For the purposes of this planning effort, it must be assumed that these withdrawals will remain in effect and that the planning and management authorities for these withdrawn lands will remain with those agencies. Thus, the planning

effort will not include consideration of any planning or management decisions for either the federal land surface or the federal minerals within these withdrawn areas. These lands will be considered in conducting the environmental analysis for the planning effort in terms of cumulative impacts and in terms of how they may be affected by management in the planning area or vice versa.

Criteria for BLM Areas of Critical Environmental Concern and Forest Service Special Interest Areas

The relevance and importance criteria for ACEC designation, found in BLM Manual 1613, were applied to BLM-administered public lands in the planning area to identify areas that have the potential for ACEC designation (BLM 2006). An ACEC designation alone does not change the allowed uses of public lands involved (FLPMA Section 201(a) and 43 CFR §1601.0-5a). In addition, protective measures for ACECs are not applied or required simply because of the designation. Any protective measures applied to ACECs are based on what is necessary to protect the relevance and importance criteria for which the ACEC was designated. The only automatic requirement associated with an ACEC designation is that a plan of operations must be submitted for any [locatable mineral] operations causing surface disturbance greater than casual use (43 CFR §3809.11(c)(3)).

Forest Service Special Interest Areas are managed to protect or enhance areas with unusual characteristics. Management emphasis is on protecting or enhancing, and where appropriate developing and interpreting for public education and recreation. These areas are managed to maintain their special interest values. The setting is usually natural, but will vary depending on the area. Typically, Special Interest Areas (also known as SIAs) are designated as botanical, geological, historical, paleontological, scenic, or zoological areas. Special Interest Areas may also be designated to protect and manage threatened, endangered, and sensitive species, or other elements of biological diversity; or for their emotional significance, scenic values, or public popularity. Special Interest Areas vary in size from small to fairly large. In addition, places such as caves, hot springs, cultural resource sites, 14,000 foot peaks, significant views, state designated historic sites, and potential developed sites could be considered for Special Interest Area designation. Alternatives B and C include designation of ACECs or SIAs for priority Greater Sage-Grouse habitat.

Vegetation, terrestrial and aquatic habitat, soil productivity, and water quality will usually, but not always, appear natural (relatively pristine or pre-settlement). Vegetative manipulation may be used to maintain or restore natural conditions, to protect threatened, endangered, and sensitive species, or to protect other values for which the Special Interest Area was proposed or designated. Management implementation guidelines ensure protection of the values for which the area was proposed or designated (R2 Forest Planning Desk Guide).

Criteria for Greater Sage-Grouse Conservation Objectives

The BLM will use the USFWS's Greater Sage-Grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report (USFWS 2013), WAFWA's Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats (Connelly et al. 2004), US Geological Survey's (USGS) Summary of Science, Activities, Programs and Policies that Influence the Rangewide Conservation of Greater Sage-Grouse (*Centrocercus urophasianus*) (Manier et al. 2013), and any other appropriate resources to identify Greater Sage-Grouse habitat requirements and BMPs.

1.10 Relevant Statutes, Limitations, and Guidelines

Numerous federal and state laws and applicable regulations, policies, and actions affect the alternatives analyzed in the Proposed LUP Amendments/Final EIS. FLPMA is the primary authority for BLM administration of public lands. This law provides the overarching policy by which the BLM administers

public lands. The law establishes provisions for land use planning, land acquisition, administration, range management, rights-of-way, designated management areas, and the repeal of certain laws and statutes. FLPMA Sections 201 and 202 establish BLM land use planning requirements. BLM Handbook H-1601-1, *Land Use Planning Handbook* (BLM 2005), provides guidance for implementing BLM land use planning requirements established in FLPMA Sections 201 and 202 and the land use planning regulations at 43 CFR 1600. FLPMA also requires that the BLM provide food and habitat for fish, wildlife, and domestic species.

LRMPs are prepared in accordance with the NFMA, NEPA, and other laws and regulations. The Forest Service implemented the 1982 Planning Rule (47 FR 43037), and the National Forest System Land and Resource Management Planning Act when developing the documents being amended in this planning effort.

NEPA establishes a public, interdisciplinary framework for Federal decision-making and ensures that agencies (BLM and all other agencies) take environmental factors into account when considering federal actions. NEPA does not mandate protection of the environment. Instead, it requires agencies to follow a particular process in making decisions and to disclose the information/data that was used to support those decisions. Amending an existing RMP is a major federal action for the BLM. It is also a major federal action to amend Forest Service LRMPs. NEPA requires federal agencies to prepare an EIS for major federal actions; therefore, this EIS accompanies the revisions of the existing plans.

NEPA also created the CEQ, which issued regulations (40 CFR 1500-1508) to ensure proper consideration of environmental concerns in federal decision-making. The DOI and the BLM have published their own regulations and guidance related to implementation of the NEPA process and CEQ regulations (DOI Manual Part 516 and Handbook H-1790-1).

This section provides a listing of the authorities that apply to the selection and implementation of management actions in the RMPs and LRMPs. Many additional laws, regulations, and policies guide the management of public lands and are therefore relevant to the LUP Amendments. A list of these laws, regulations, and policies is provided in Appendix L.

1.11 Relationship to Other Plans

The BLM and the Forest Service LUPs and amendments must be consistent with officially approved or adopted resource-related plans, and the policies and programs contained therein, of other federal agencies, state and local governments, and Native American tribes, so long as the guidance and RMPs are also consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands, including federal and state pollution control laws as implemented by applicable federal and state air, water, noise, and other pollution standards or implementation plans.

The BLM is aware that there are specific state laws and local plans relevant to aspects of public land management that are discrete from, and independent of, federal law. However, BLM is bound by federal law. As a consequence, there may be inconsistencies that cannot be reconciled. The FLPMA and its implementing regulations require that BLM's land use plans be consistent with officially-approved state and local plans only if those plans are consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands. Where officially-approved state and local plans or policies and programs conflict with the purposes, policies, and programs of federal law applicable to public lands, there will be an inconsistency that cannot be resolved. With respect to officially-approved state and local policies and programs (as opposed to plans), this consistency provision only applies to the maximum extent practical. While county and federal planning processes, under FLPMA, are required to as

integrated and consistent as practical, the federal agency planning process is not bound by or subject to state or county plans, planning processes, policies, or planning stipulations.

The Energy Policy Act of 2005

The Energy Policy Act of 2005, Section 368, directed that BLM participate in an interagency effort to identify, evaluate, and ultimately establish ROW corridors to accommodate infrastructure that transports forms of energy. Energy-related infrastructure could include natural gas pipelines, high-voltage electrical transmission lines, and similar developments. Upon completion of a programmatic EIS and ROD, planning documents would be amended to incorporate guidance and decisions made for management of the energy corridors established within the planning area.

State of Wyoming's Greater Sage-Grouse Conservation Strategy

On August 1, 2008, former Wyoming Governor Dave Freudenthal signed the first of what would become a short series of Wyoming EOs to establish the State of Wyoming's Greater Sage-Grouse Conservation Strategy. The analysis leading up to the EO included a careful review of recommendations developed by the Sage-grouse Implementation Team (SGIT). The group was formed at the direction of the governor and includes BLM, state agencies, energy industry, natural resource professionals including academia, conservation organizations, local governments, private citizens, and others.

The strategy includes population management objectives within and outside "Sage-Grouse Core Areas." The Core Area Strategy in Wyoming has been clarified, refined and continued by current Wyoming Governor Matt Mead. Governor Mead signed his own Executive Order (EO 2011-5) June 2, 2011, to replace and refine EOs from the former Governor. The latest EO continues support of the State's Core Area Strategy for sage-grouse conservation.

All of the EOs of Governor Freudenthal and now Governor Mead, have identified core area objectives and each subsequent order has further refined Wyoming's strategy for long-term conservation, maintenance and on-going management of Greater Sage-Grouse populations and associated habitats within the state, regardless of land ownership pattern.

The primary focus of Wyoming's efforts are 1) maintenance and restoration of suitable habitats within core areas, 2) maintenance of active breeding and nesting birds within core areas, 3) identification and conservation of other important habitat outside core areas, and 4) maintenance of potential for restoration and reclamation outside core areas.

The Wyoming Core Area Strategy includes protective stipulations for sage-grouse (limitations on development activities), based upon their biological needs and a GIS-based procedure for determining levels of anthropogenic (man-made) disturbance on the landscape within the core areas. These disturbances consist of roads, well pads, pipelines, mine pits, and other similar surface alterations. Per the Sage-grouse Executive Order, these disturbances are limited in core areas to minimize anthropogenic activities and disturbances within high density population areas. Habitats and populations outside core areas are monitored and managed for future rehabilitation.

Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, U.S. Department of the Interior, Bureau of Land Management 2005

The U.S. DOI, BLM, is responsible for the development of wind energy resources on BLM-administered lands. Currently, about 500 MW of installed wind capacity occurs under ROW authorizations administered by the BLM in accordance with the requirements of the Federal Land Policy and

Management Act of 1976 (FLMPA) (United States Code, Title 43, Section 1701 [43 USC 1701]) and the BLM's Interim Wind Energy Development Policy (BLM 2002).

This interim policy was developed, in part, in response to the National Energy Policy recommendations that the Departments of the Interior, Energy, Agriculture, and Defense work together to increase renewable energy production (NEPDG 2001). The interim policy is consistent with the requirements of EO 13212, "Actions to Expedite Energy Related Projects," issued May 2001, that federal agencies take appropriate actions, to the extent consistent with applicable law, to expedite projects to increase the production, transmission, or conservation of energy. To further support wind energy development on public lands and also to minimize potential environmental and sociocultural impacts, the BLM is seeking to build on the interim policy to establish a Wind Energy Development Program.

CHAPTER 2—ALTERNATIVES

2.1 CHANGES BETWEEN THE DRAFT EIS AND FINAL EIS

As a result of public comments, best science, cooperating agency coordination, and internal review of the Draft Land Use Plan (LUP) Amendments/Environmental Impact Statement (EIS), the Bureau of Land Management's (BLM) and Forest Service's Preferred Alternative, identified as Alternative E in the Draft LUP Amendments/Draft EIS, has been modified and is now the Proposed LUP Amendments for managing BLM-administered lands and National Forest System lands within the Wyoming Greater Sage-Grouse planning area. The Proposed LUP Amendments focus on addressing public comments, while continuing to meet the BLM's and Forest Service's legal and regulatory mandates.

Changes to the alternatives between the Draft EIS and Final EIS:

As a result of public comments, best science, cooperating agency coordination, and internal review of the Draft LUP Amendments/Draft EIS, the BLM and Forest Service have developed the Proposed LUP Amendments/Final EIS for managing BLM-administered and National Forest System lands in the Wyoming Greater Sage-Grouse sub-region. The Proposed LUP Amendments/Final EIS focuses on addressing public comments, while continuing to meet the BLM's and Forest Service's legal and regulatory mandates. The Proposed LUP Amendments/Final EIS is a variation of the Preferred Alternative (Alternative E) and is within the range of alternatives analyzed in the Draft EIS. Changes made to the Proposed LUP Amendments/Final EIS from the Preferred Alternative (Alternative E) in the Draft LUP Amendments/Draft EIS are the following:

- Allocations for Priority Habitat Management Areas (PHMA) and General Habitat Management Areas (GHMA)—allocations in the Proposed LUP Amendments/Final EIS provide more opportunities for uses in GHMAs, while still maintaining conservation management by establishing screening criteria for project/activity review in Greater Sage-Grouse habitat. In the Proposed LUP Amendments (previously identified as Alternative E in the Draft LUP Amendments/Draft EIS), the following areas that were identified as general habitat in Alternatives B, C, and D are managed like PHMA-core or PHMA-connectivity:
    - 32,756.82 acres of PHMA-connectivity on the Bridger-Teton National Forest
    - 63,195.32 acres of PHMA-core on the Bridger-Teton National Forest
    - 54,252.59 acres of PHMA-core on the Thunder Basin National Grasslands
    - 3,335.85 acres that were identified as core habitat in Alternatives B, C, and D are managed as Sagebrush Focal Areas (SFA) on the Bridger-Teton National Forest.
- SFAs—These areas have been identified in the Proposed LUP Amendments based on recommendations in a U.S. Fish and Wildlife Service (USFWS) memorandum, and are proposed to be managed as PHMAs with the following additional management: Portions are recommended for withdrawal from locatable mineral location and entry; and prioritized for management and conservation actions including, but not limited to review of livestock grazing permits/leases. Alternative E (now the Proposed LUP Amendments) identified areas recommended for withdrawal, and/or prioritization for grazing, and analyzed the impacts of those decisions. See Draft EIS, Table 2-4. As such, the management of these areas as SFAs and the impacts of the associated management decisions were addressed in the Draft EIS and is qualitatively within the spectrum of alternatives analyzed.

- The BLM will manage these areas, totaling approximately 1,915,990 acres within the Wyoming sub-region, as SFAs, because of the importance of these areas to the conservation of the species range-wide. Specifically, SFAs include characteristics such as existing high-quality sagebrush habitat; highest breeding densities; have been identified as essential to conservation and persistence of the species; represent a preponderance of current federal ownership and in some cases are adjacent to protected areas that serve to anchor the conservation importance of the landscape. In light of the landscape-level approach to sage-grouse conservation provided through this planning effort and as defined by the characteristics set forth above, as well as additional considerations, including potential for impacts from climate change, fire and invasive species, these areas have been identified as SFAs (see Management Actions 128, 137 and 138, and planning criteria in Chapter 1).
- As noted in the Draft EIS, one of the goals/objectives of this planning effort is to protect both the habitat and the species (see Management Goal 1 and Management Objectives 2 through 6). The habitat in the SFAs exhibits areas of high-quality sagebrush habitat, areas with highest breeding densities, and areas identified as essential to conservation and persistence of the species.

- In November 2014, the USGS released their Report on Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Mainer et al. 2014). The purpose of this report is to provide a reference for land managers and others who are working to develop biologically relevant and socioeconomically practical buffer distances around sage-grouse habitats. The Proposed LUP Amendments, in accordance with the State of Wyoming's Core Area Strategy, impose restrictions targeted to the individual threats to breeding and nesting activity in Greater Sage-Grouse habitat. In light of the USGS report, the USFWS has indicated that the Core Area Strategy's overlapping and reinforcing mechanisms gives the USFWS confidence that the lek-buffer distances in the State's Core Area Strategy will be protective of breeding sage-grouse for habitat within the State of Wyoming. The buffers in the Proposed LUP Amendments (consistent with the State's Core Areas Strategy) were designed based on recommendations from biologists in the USFWS, BLM, and WGFD, and based on WAFWA standards. Thus, the findings of the Buffer Study have not been incorporated into the Proposed LUP Amendments. Adaptive Management—Identification of hard and soft adaptive management triggers for population and habitat and identified appropriate management responses.
- Chapter 2 of the Draft EIS identified that the BLM and Forest Service would further develop the adaptive management approach by identifying hard and soft triggers and responses. All of the adaptive management responses were analyzed within the management actions common to all alternatives except the "no action" alternative.
- Monitoring and Disturbance—The monitoring framework was further refined in the Final EIS, and further clarification as to how disturbance cap calculations would be measured were developed for the Final EIS. During the public comment period, the BLM received comments on how monitoring and disturbance cap calculations would occur at implementation. The Draft EIS outlined the major components of the monitoring strategy, as well as provided a table portraying a list of anthropogenic disturbances that would count against the disturbance cap. A BLM disturbance and monitoring sub-team further enhanced the Appendix D in the Final EIS.
- Mitigation Strategy; Net Conservation Gain—The Proposed LUP Amendments provide for a net conservation gain standard of mitigation when BLM or Forest Service authorizes activities in PHMAs. This strategy is in response to the overall landscape-scale goal which is to enhance, conserve, and restore Greater Sage-Grouse and its habitat. All of the action alternatives provided management actions to meet the landscape-scale goal (see Goal #1 and Management Action 40).

- Western Association of Fish and Wildlife Agencies (WAFWA) Management Zone Cumulative Effects Analysis on Greater Sage-Grouse—A quantitative cumulative effects analysis for Greater Sage-Grouse was included in the Final EIS. This analysis was completed to analyze the effects of management actions on Greater Sage-Grouse at a biologically significant scale which as determined to be at the WAFWA Management Zone. The Draft EIS, in Chapter 4, included a qualitative analysis and identified that a quantitative analysis would be completed for the Final EIS at the WAFWA Management Zone.
- Forest Service Plan Amendment—Chapter 2 separates the Forest Service Proposed LUP Amendments and the BLM Proposed LUP Amendments. This is because the Forest Service has different guidance for writing planning language; however, the actions are basically the same for both the BLM and Forest Service under the Proposed LUP Amendments.
- Public Comment on Draft EIS—Updated the Final EIS based on public comment received on the Draft EIS (see Appendix O, Response to Public Comments Report).

NEPA requires agencies to prepare a supplement to the Draft EIS if (1) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (2) if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. A supplement is not necessary if a newly formulated alternative is a minor variation of one of the alternatives and is qualitatively within the spectrum of alternatives analyzed in the Draft EIS.

The Proposed LUP Amendments include components of the alternatives analyzed in the Draft EIS. Taken together, these components present a suite of management decisions that present a minor variation of the Preferred Alternative identified in the Draft LUP Amendments/Draft EIS and are qualitatively within the spectrum of alternatives analyzed.

As such, the BLM has determined that the Proposed LUP Amendments is a minor variation of the Preferred Alternative and that the impacts of the Proposed LUP Amendments would not affect the human environment in a substantial manner or to a significant extent not already considered in the EIS. The impacts disclosed in the Proposed LUP Amendments/Final EIS are similar or identical to those described Draft LUP Amendments/Draft EIS.

2.2 INTRODUCTION

The Greater Sage-Grouse LUP Amendments/Final EIS complies with NEPA, which directs the BLM and Forest Service to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources..." (NEPA Section 102[2][e]). At the heart of the alternative development process is the required development of a reasonable range of alternatives. Public and internal (within BLM and Forest Service) scoping (see Section 1.8, Planning Issues) identified issues that present opportunities for alternative courses of action, while the purpose and need for action described in Section 1.4, Purpose and Need for the Land Use Plan Amendments, provides sideboards for determining "reasonableness."

This chapter introduces and details the Proposed LUP Amendments. The Proposed LUP Amendments are a mix of management actions selected from the range of alternatives in the Draft LUP Amendments/Draft EIS and is based on best science, public scoping comments, public comments on the Draft LUP Amendments/Draft EIS and internal agency discussion. The alternatives that were in the Draft LUP Amendments/Draft EIS are also included in this chapter. These include the No Action Alternative, which would continue the existing policies of the BLM and Forest Service; three action alternatives; two proposed LUP amendments; and the alternatives considered but eliminated from detailed analysis.

The identification of the Preferred Alternative in the Draft LUP Amendments/Draft EIS did not constitute a commitment or decision in principle, and there is no requirement to select the Preferred Alternative or any of the separate alternatives presented in the Draft LUP Amendments/Draft EIS as the Proposed LUP Amendments. The BLM and Forest Service have the discretion to select any of the alternatives as their Preferred Alternative in the Draft LUP Amendments/Draft EIS. The agencies also have the discretion to modify the Preferred Alternative between the Draft EIS and the Final EIS into the Proposed LUP Amendments. The modifications are allowable as long as the actions presented in the Proposed LUP Amendments were within the range of alternatives analyzed in the Draft EIS. The various parts of the separate alternatives that were analyzed in the Draft EIS can be "mixed and matched" to develop an alternative – known as the Proposed LUP Amendments – in the Final EIS, as long as the reasons for doing so are explained (40 Code of Federal Regulation (CFR) 1506.2(b)).

2.3 Introduction to Draft Alternatives

LUP decisions consist of identifying and clearly defining goals and objectives (desired outcomes) for resources and resource uses, followed by developing allowable uses and management actions necessary for achieving the goals and objectives. These critical determinations guide future land management actions and subsequent site-specific implementation actions to meet multiple use and sustained yield mandates while sustaining land health.

2.3.1 Components of Alternatives

Goals are broad statements of desired (LUP-wide and resource- or resource-use-specific) outcomes and are not quantifiable or measurable. Objectives are specific measurable desired conditions or outcomes intended to meet goals. Goals and objectives can vary across alternatives, resulting in different allowable uses and management actions for some resources and resource uses. Forest Service objectives are also time specific.

Management actions and allowable uses are designed to achieve objectives. Management actions are measures that guide day-to-day and future activities. Allowable uses delineate which uses are permitted, restricted, or prohibited, and may include stipulations or restrictions. Allowable uses also identify lands where specific uses are excluded to protect resource values, or where certain lands are open or closed in response to legislative, regulatory, or policy requirements. Implementation decisions are site-specific on-the-ground actions and are typically not addressed in LUPs.

On National Forest System lands, forest plans guide management activities and contain desired conditions and objectives as well as standards and guidelines that provide direction for project planning and design. Desired conditions are descriptions of specific social, economic, and/or ecological characteristics of the planning area, or a portion of the planning area, toward which management of the land and resources should be directed. Standards are mandatory constraints on project and activity decisionmaking. Not meeting a standard would require a site-specific forest plan amendment. A guideline is a constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met.

2.3.2 Purpose of Alternatives Development

Land use planning and NEPA regulations require the BLM and Forest Service to formulate a reasonable range of alternatives. Alternative development is guided by established planning criteria (as outlined for the BLM at 43 CFR 1610) (see Chapter 1).

The NEPA regulations at 40 CFR Part 1501.2(c) state that federal agencies shall: "Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflict concerning alternatives uses of available resources...."

The basic goal of alternative development is to produce distinct potential management scenarios that:

- Address the identified major planning issues
- Explore opportunities to enhance management of resources and resource uses
- Resolve conflicts among resources and resource uses
- Meet the purpose of and need for the LUP or LUP Amendments.

Pursuit of this goal provides the BLM, Forest Service, and the public with an appreciation for the diverse ways in which conflicts regarding resources and resource uses might be resolved, and offers the decision-maker a reasonable range of alternatives from which to make an informed decision. The components and broad aim of each alternative considered for the Casper, Green River (covering the Rock Springs Field Office), Kemmerer, Newcastle, Pinedale, and Rawlins Resource Management Plans (RMP); and the Bridger-Teton National Forest (BTNF), Medicine Bow National Forest (MBNF), and Thunder Basin National Grassland (TBNG) Land and Resource Management Plans (LRMP) are discussed below.

2.4 ALTERNATIVE DEVELOPMENT PROCESS FOR THE WYOMING GREATER SAGE-GROUSE LAND USE PLAN AMENDMENTS

The Wyoming Greater Sage-Grouse Land Use Plan Amendments planning team employed the BLM planning process (outlined in Section 1.5., Readers Guide to the EIS Process) to develop a reasonable range of alternatives for the LUP Amendments/EIS. The BLM and Forest Service complied with NEPA and the Council on Environmental Quality (CEQ) implementing regulations at 40 CFR Part 1500 in the development of alternatives for this Proposed LUP Amendments/Final EIS, including seeking public input and analyzing reasonable alternatives. Where necessary to meet the planning criteria, to address issues and comments from cooperating agencies and the public, or to provide a reasonable range of alternatives, the alternatives include management options for the planning area that would modify or amend decisions made in the applicable LUP. Since this LUP Amendments/Final EIS will specifically address Greater Sage-Grouse conservation, many decisions within existing LUPs that do not impact Greater Sage-Grouse are acceptable and reasonable; in these instances, there is no need to develop alternative management prescriptions.

Public input received during the scoping process was considered to identify significant issues deserving of detailed study to help identify alternatives. The planning team developed planning issues to be addressed in the LUP Amendments/EIS, based on broad concerns or controversies related to conditions, trends, needs, and existing and potential uses of planning area lands and resources. All comments were reviewed to determine whether they identified significant issues or unresolved conflicts.

2.4.1 Develop a Reasonable Range of Alternatives

Based on scoping and collaboration efforts, the BLM and Forest Service finalized their planning criteria and identified 25 key planning criteria to help frame the alternatives development process. Following the close of the public scoping period in March 2012, the BLM and the Forest Service began the alternatives development process. Between November 2010 and January 2013, the planning team (BLM, Forest Service, and cooperating agencies) met to develop management goals and to identify objectives and actions to address the goals. The various groups met numerous times throughout this period to refine their work. As outcomes of this process, the planning team:

- Developed one No Action Alternative (Alternative A) and four preliminary action alternatives. The first action alternative (Alternative B) is based on *A Report on National Greater Sage-Grouse Conservation Measures* (NTT 2011).
- Alternative C is based on a proposed alternatives submitted by conservation groups.
- Customized the goals, objectives, and actions from the National Technical Team (NTT)-based alternative (Alternative B) to develop a third action alternative (Alternative D) that strives for balance among competing interests.
- Incorporated proposed Greater Sage-Grouse protection measures recommended by state governments as a fifth alternative (Alternative E).

Each of the preliminary action alternatives in the Draft LUP Amendments/Draft EIS was designed to:

- Address the 26 planning issues (identified in Section 1.8.1)
- Fulfill the purpose and need for the LUP Amendments (outlined in Section 1.4, Purpose and Need for the Land Use Plan Amendments)
- Meet the multiple use mandates of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 CFR 1716), MUSYA and National Forest Management Act of 1976 (NFMA).

2.4.2 Resulting Range of Alternatives in the Draft LUP Amendments/Draft EIS

The four resulting action alternatives (Alternatives B, C, D and E) in the Draft LUP Amendments/Draft EIS offer a range of management approaches to maintain or increase Greater Sage-Grouse abundance and distribution of Greater Sage-Grouse by conserving, enhancing, or restoring the sagebrush ecosystem upon which Greater Sage-Grouse populations depend in collaboration with other conservation partners. While the goal is the same across all the alternatives, each alternative contains a discrete set of objectives and management actions constituting separate LUP Amendments. The goal is met in varying degrees, with the potential for different long-range outcomes and conditions.

The relative emphasis given to particular resources and resource uses differs as well, including allowable uses, restoration measures, and specific direction pertaining to individual resource programs. When resources or resource uses are mandated by law or are not tied to planning issues, there are typically few or no distinctions among alternatives.

The meaningful differences among the alternatives are described in Section 2.9, Comparison of Proposed LUP Amendments and Draft Alternatives. Section 2.10, Detailed Description of Draft Alternatives, also provides a complete description of the proposed decisions for each alternative, including the project goal and objectives, management actions, and allowable uses for individual resource programs. Maps and figures provide a visual representation of differences between alternatives. In some instances, varying levels of management overlap a single area, or polygon, due to management prescriptions from different resource programs. In instances where varying levels of management prescriptions overlap a single polygon, the stricter of the management prescriptions would apply.

2.5 BLM AND FOREST SERVICE RESOURCE PROGRAMS FOR ADDRESSING GREATER SAGE-GROUSE THREATS

The direction for managing Greater Sage-Grouse habitat in this document is focused on responding to the threats identified by the USFWS in their 2010 warranted but precluded finding on listing the Greater Sage-Grouse, as well as their Conservation Objectives Team (COT) Report. The USFWS threats do not necessarily align with BLM or Forest Service resource program areas, and are often integrated into several different resource program areas. Table 2-1, USFWS Threats to Greater Sage-Grouse and Their Habitat, Applicable BLM and Forest Service Proposed LUP Amendments Resource Program Areas Addressing These Threats, provides a cross-walk between each of the 2010 warranted but precluded finding and COT identified threats and the BLM and Forest Service program areas addressing these threats, with references to specific sections of the LUP amendments.

Table 2-1. USFWS Threats to Greater Sage-Grouse and Their Habitat, Applicable BLM and Forest Service Proposed Land Use Plan Resource Program Areas Addressing These Threats

USFWS-Identified Threats to Greater Sage-Grouse and Its Habitat (2010 warranted but precluded finding)	COT Report-Identified Threats to Greater Sage-Grouse and Its Habitat (2013)	Applicable BLM and Forest Service Proposed Land Use Plan Resource Program Addressing Threat
Wildland Fire	Fire	BLM: Wildland Fire Management Forest Service: Fire Management
Invasive Species	Non-native, Invasive Plants Species	BLM: Vegetation Management, Range Management, Wildland Fire Management, and Recreation Forest Service: Greater Sage-Grouse Habitat, Fire Management, and Roads and Transportation
Oil and Gas For wind energy development, see *Infrastructure – power lines/pipelines, roads (below)*	Energy Development	BLM: Lands and Realty and Fluid Minerals Forest Service: Lands and Realty and Fluid Minerals
Prescribed Fire	Sagebrush Removal	BLM: Vegetation Management and Wildland Fire Management Forest Service: Greater Sage-Grouse Habitat and Fire Management
Grazing	Grazing	BLM: Range Management, Wild Horse and Burro Management, Special Status Species, and Vegetation Management Forest Service: Livestock Grazing
See *Grazing Management (above)*	Range Management Structures	BLM: Range Management Forest Service: Livestock Grazing
No similar threat identified	Free-Roaming Equid Management	BLM: Wild Horse and Burro Management Forest Service: There is no Free Roaming Equid Management Direction in the Forest Service plan amendments.
Conifer Encroachment	Pinyon and/or Juniper Expansion	BLM: Wildland Fire Management and Vegetation Management Forest Service: Fire Management and Greater Sage-Grouse Habitat
Agriculture & Urbanization	Agricultural Conversion and Ex-Urban Development	BLM: Lands and Realty Forest Service: Lands and Realty/Land Ownership Adjustments

USFWS-Identified Threats to Greater Sage-Grouse and Its Habitat (2010 warranted but precluded finding)	COT Report-Identified Threats to Greater Sage-Grouse and Its Habitat (2013)	Applicable BLM and Forest Service Proposed Land Use Plan Resource Program Addressing Threat
Hard Rock Mining	Mining	BLM: Lands and Realty, Locatable Minerals, Salable Minerals, and Non-energy Leasable Minerals Forest Service: Coal Mines, Locatable Minerals, Non-energy Leasable Minerals, and Mineral Materials
See Infrastructure, Roads	Recreation	BLM: Recreation and Trails and Travel Management Forest Service: Recreation and Roads/Transportation
Infrastructure • Power lines/pipelines • Roads • Communication sites • Railroads Range improvements (see below)	Infrastructure	BLM: Lands and Realty and Trails and Travel Management Forest Service: Infrastructure, Lands and Realty and Roads/Transportation
Infrastructure – Range Improvements	Range Management Structures	BLM: Range Management Forest Service: Livestock Grazing
Water Developments	No similar threat identified	All applicable programs
Climate Change	No similar threat identified	There is no BLM or Forest Service resource program in the Proposed LUP Amendments addressing this threat.
Weather	No similar threat identified	There is no BLM or Forest Service resource program in the Proposed LUP Amendments addressing this threat.
Predation	No similar threat identified	BLM: All applicable programs Forest Service: Greater Sage-Grouse Habitat, Land and Realty, Minerals, and Predators
Disease	No similar threat identified	BLM: All applicable programs Forest Service: Minerals/Fluid Mineral Operations
Hunting	No similar threat identified	There is no BLM or Forest Service resource program in the Proposed LUP Amendments addressing this threat.
Contaminants	No similar threat identified	BLM: Public Health and Safety Forest Service: Fluid Minerals

Source: USFWS 2010, 2013

2.6 Proposed Land Use Plan Amendments/Proposed Management of Greater Sage-Grouse Habitat

2.6.1 Development of the Proposed Land Use Plan Amendments for Greater Sage-Grouse Management

The BLM and Forest Service modified the Preferred Alternative, identified as Alternative E in the Draft LUP Amendments/Draft EIS, which is now considered the Proposed LUP Amendments for managing BLM-administered and National Forest System lands within the Wyoming Greater Sage-Grouse planning area. The modifications are based on public comments received on the Draft LUP Amendments/Draft EIS, internal BLM and Forest Service review, new information and best available science, the need for clarification in the plans, and ongoing coordination with stakeholders across the range of the Greater Sage-Grouse. As a result, the Proposed LUP Amendments provide consistent Greater Sage-Grouse habitat management across the range, prioritize development outside of Greater Sage-Grouse habitat, and focus on a landscape-scale approach to conserving Greater Sage-Grouse habitat.

Since release of the Draft LUP Amendments/Draft EIS, the BLM and Forest Service have continued to work closely with a broad range of governmental partners, including Governors, State Fish and Game agencies, the USFWS, Indian tribes, county commissioners and many others. Through this cooperation, the BLM and Forest Service have developed Proposed LUP Amendments that take into account state, tribal, and local plans, policies, and strategies in accordance with applicable law, and contribute to the long-term conservation of the Greater Sage-Grouse. The BLM and Forest Service also received many substantive public comments on the Draft LUP Amendments (Appendix O), which greatly informed the BLM/Forest Service's development of the Proposed LUP Amendments.

The BLM/Forest Service's Proposed LUP Amendments consider documents related to the conservation of Greater Sage-Grouse that have been released since the publication of the Draft LUP Amendments/Draft EIS. For example, these Proposed LUP Amendments consider the USFWS' October 27th, 2014 memorandum *Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes* and the USGS' November 21st, 2014 report *Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review (USGS 2014)*. Based on these documents, the BLM and Forest Service are proposing to designate SFAs to further protect highly valuable habitat and are proposing disturbance limits, excluded activities, and a sophisticated mapping utility to monitor the amount and density of disturbance when authorizing activities near leks. The BLM and Forest Service also updated the Proposed LUP Amendments to reflect new Greater Sage-Grouse state conservation strategies, including recent state executive orders. The objectives of these documents are consistent with the State of Wyoming's Core Area Strategy, which is designed to protect Greater Sage-Grouse and its habitat within core areas using a suite of tools and mechanisms that work in concert to conserve sage-grouse by reducing habitat loss and fragmentation through lek buffers, disturbance limits, excluding activities, and a sophisticated mapping utility to monitor the amount and density of disturbance.

The BLM and Forest Service have refined the Proposed LUP Amendments to provide a layered management approach that offers the highest level of protection for Greater Sage-Grouse in the most valuable habitat. Land use allocations in the Proposed LUP Amendments would limit or eliminate new surface disturbance in PHMAs, while minimizing disturbance in GHMAs. In addition to establishing protective land use allocations, the Proposed LUP Amendments would implement a suite of management tools such as disturbance limits (management action 127 and GRSG-TDDD-ST-009), Greater Sage-Grouse habitat objectives and monitoring (Tables 2-2, 2-3, and 2-5 and Appendix D), Greater Sage-Grouse habitat desired conditions (GRSG-GRSGH-DC-001 and 002), mitigation approaches (management action 128, GRSG-TDDD-GL-002, and Appendix D), adaptive management triggers and responses (management

actions 137 and 138, GRSG-GRSGH-ST-002, GRSG-GRSGH-ST-003, and Appendix D), and lek buffer-distances (management actions 129 through 134 and GRSG-TDDD-ST-001 through 007) throughout the range. These overlapping and reinforcing conservation measures will work in concert to improve Greater Sage-Grouse habitat condition and provide clarity and consistency on how the BLM and Forest Service will manage activities in Greater Sage-Grouse habitat.

For the sake of clarity, BLM and Forest Service decisions have been separated into two sections (described in Section 2.6.3 and 2.6.4, respectively) in the Proposed LUP Amendments.

2.6.3 BLM Proposed LUP Amendments

Management Goals

1. Conserve, recover, and enhance sage-grouse habitat on a landscape scale consistent with local, state, and federal management plans and policies, as practical, while providing for multiple use of BLM-administered lands and National Forest System lands.

Management Objectives

1. In cooperation with State of Wyoming and its agencies, local governments, private landowners, local sage-grouse working groups, partners and stakeholders, develop site-specific conservation strategies to maintain or enhance sage-grouse habitats and habitat connectivity.

2. Enhance quality/suitable habitat to support the expansion of sage-grouse populations on federally-administered lands within the planning areas.

3. Manage sage-grouse seasonal habitats and maintain habitat connectivity to support population objectives set by the State of Wyoming in cooperation with the agencies.

4. Identify and prioritize opportunities for habitat enhancement and conservation within sage-grouse core habitat areas based on threats and the ability to manage sage-grouse habitat.

5. Restore native (or desirable) plants and create landscape patterns which most benefit sage-grouse.

6. Develop specific objectives to conserve, enhance or restore sage-grouse priority habitat based on Ecological Site Descriptions (ESD) (Forest Service may use other methods) and BLM land health evaluations (including within wetland and riparian areas) taking into account site history (historic treatments or habitat manipulations) that have changed the soil chemistry possibly altering the ESD. If an effective grazing system that meets sage-grouse habitat requirements is not already in place, analyze at least one alternative that conserves, restores, or enhances sage-grouse habitat in the NEPA document prepared for grazing management (Doherty et al. 2011b, Williams et al. 2011).

7. Establish measurable objectives related to sage-grouse habitat from baseline monitoring data, ESDs (Forest Service may use other methods), or land health assessments/evaluations.

8. Manage for vegetation composition and structure consistent with ecological site potential (Forest Service may use other methods) to achieve sage-grouse seasonal habitat objectives.

9. Incorporate available site information collected using the Sage-Grouse Habitat Assessment Framework or similar methods to evaluate existing resource conditions and to develop any necessary resource solutions in cooperation with State of Wyoming and its agencies, the local governments, private landowners, project proponents, partners, and stakeholders.

10. Incorporate management practices that will provide for maintenance and/or enhancement of sage-grouse habitats, including specific attention to maintenance of desired understories of sagebrush plant communities. When developing objectives for residual cover and species diversity, identify the ecological site types within the planning area and refer to the appropriate ESDs (Forest Service may use other methods).

11. In determining appropriate management actions that will be considered, refer to the document, "Grazing Influence, Management, and Objective Development in Wyoming's Greater Sage-Grouse Habitat" (Cagney et al. 2010) for guidance.

12. Identify PHMAs and GHMAs for each WAFWA MZ across the current geographic range of Greater Sage-Grouse that are large enough to stabilize populations in the short term and enhance populations over the long term. Greater Sage-Grouse habitat in this planning area overlaps 2 WAFWA MZs: (1) MZ I-Great Plains and (2) MZ II-Wyoming Basin.

13. Protect PHMAs and GHMAs from anthropogenic disturbance that will reduce distribution or abundance of Greater Sage-Grouse.

14. Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA and GHMA, and subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 U.S.C. 226(p) and 43 C.F.R. 3162.3-1(h).

    Where a proposed fluid mineral development project on an existing lease could adversely affect Greater Sage-Grouse populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an application for permit to drill (APD) for the lease to avoid and minimize impacts to sage-grouse or its habitat and will ensure that the best information about the Greater Sage-Grouse and its habitat informs and helps to guide development of such federal leases.

15. In all SFAs and PHMAs, the desired condition is to maintain a minimum of 70 percent of lands capable of producing sagebrush with 10 to 30% sagebrush canopy cover. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6).

16. The habitat objectives will be part of the sage-grouse habitat assessment to be used during land health evaluations (see Monitoring Framework, Appendix D). These habitat objectives are not obtainable on every acre within the designated Greater Sage-Grouse habitat management areas. Therefore, the determination on whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in the table.

All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives. If monitoring data show the habitat objectives have not been met nor progress being made towards meeting them, there will be an evaluation and a determination made as to the cause. If it is determined that the authorized use is a cause, the use will be adjusted by the response specified in the instrument that authorized the use.

This information should not be viewed as providing standards by which to judge the overall quality of sagebrush habitats. Instead, these sage-grouse habitat characteristics should be used as one tool for assessing habitats and guiding management actions. There is a tendency to review each indicator and its suitability category independently, but site suitability is determined by the relationship among the several indicator values in each matrix and the relative abundance of habitat types across the landscape. It is important to understand that the desired conditions described for these habitat types are based on average plant productivity and structural data and expert opinion relative to sage-grouse use of a subset of sagebrush

communities and they may not apply to all sagebrush communities in the planning area variation (Davies et al. 2006). These measures also do not account for inter-annual climate variation (Davies et al. 2006). Individual indicator values do not define site suitability and overall site suitability descriptions require an interpretation of the relationships between the indicators and other factors. Professional expertise and judgment are required. Measurement of these objectives will follow the steps described in Appendix D.

As described above, the identified habitat objectives are averages and will vary based on the individual ecological sites and their potential. Ecological sites are the basic component of a land-type classification system that describes ecological potential and ecosystem dynamics of land areas. All land/land use types are identified within the ecological site system, including rangeland, pasture, and forest land. An ecological site is defined as a distinctive kind of land with specific soil and physical characteristics that differ from other kinds of land in its ability to produce a distinctive kind and amount of vegetation and its ability to respond similarly to management actions and natural disturbances. Lands are classified considering discrete physical and biotic factors. Physical factors include soils, climate, hydrology, geology, and physiographic features. Biotic factors include plant species occurrence, plant community compositions, annual biomass production, wildlife-vegetation interactions, and other factors. Ecological dynamics, primarily disturbance regimes, such as grazing; fire; drought; management actions; and all resulting interactions are also a primary factor of ecological sites. Information and data pertaining to a particular ecological site is organized into a reference document known as an ESD. ESDs function as a primary repository of ecological knowledge regarding an ecological site. ESDs are maintained on the NRCS Ecological Site Information System (ESIS), which is the repository for information associated with ESDs and the collection of all site data (https://esis.sc.egov.usda.gov/Welcome/pgESDWelcome.aspx). The ESD can help interpret if a site's potential is less than or greater than the identified habitat objectives.

In addition to the references identified in the following table, the Conservation Plans developed for each of the Wyoming Local Sage-Grouse Working Groups will be consulted to identify specific habitat objectives appropriate for site-specific conditions. The Conservation Plans, updated in March 2014, are available on the WGFD website at: https://wgfd.wyo.gov/web2011/wildlife-1000817.aspx.

These habitat objectives in Table 2-2 and 2-3 summarize the characteristics that research has found represent the seasonal habitat needs for Greater Sage-Grouse. The specific seasonal components identified in the table were adjusted based on local science and monitoring data to define the range of characteristics used in this subregion. Thus, the habitat objectives provide the broad vegetative conditions we strive to obtain across the landscape that indicate the seasonal habitats used by sage-grouse. These habitat indicators are consistent with the rangeland health indicators used by the BLM.

The habitat objectives will be part of the sage-grouse habitat assessment to be used during land health evaluations (see Monitoring Framework, Appendix D). These habitat objectives are not obtainable on every acre within the designated Greater Sage-Grouse habitat management areas. Therefore, the determination on whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in the table.

All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives. If monitoring data show the habitat objectives have not been met nor progress being made towards meeting them, there will be an evaluation and a determination made as to the cause. If it is determined that the authorized use is a cause, the use will be adjusted by the response specified in the instrument that authorized the use.

Table 2-2. Seasonal Habitat Objectives for Greater Sage-Grouse Wyoming Basin Ecoregion

Attribute	Indicators	Desired Condition[7]	Reference
Breeding and Nesting (Seasonal Use Period March 1-June 15)			Doherty. 2008. Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts. Holloran and Anderson. 2005. Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats.
Lek Security	Proximity of trees	Trees absent or uncommon on shrub/grassland ecological sites within 1.8 miles (approx. 3 km) of occupied leks.	Baruch-Mordo, S., J. S. Evans, J. P. Severson, D. E. Naugle, J. D. Maestas, J. M. Kiesecker, M. J. Falkowski, C. A. Hagen, and K. P. Reese. 2013. Saving sage-grouse from trees. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Proximity of sagebrush to leks	Adjacent protective sagebrush cover within 330 ft. (approx. 100 m) of an occupied lek	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
Cover	% of seasonal habitat meeting desired conditions	>80% of the nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.).	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush cover[2]	5 to 25%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Connelly, J. W., K. P. Reese, and M. A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. University of Idaho College of Natural Resources Experiment Station Bulletin 80. University of Idaho, Moscow, ID. Hagen, C. A., J. W. Connelly, and M. A. Schroeder. 2007. A meta-analysis of Greater Sage-Grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. Wildlife Biology 13 (Supplement 1):42-50.
	Sagebrush height Arid sites[3] Mesic sites[4]	 4-31 inches (20.3-80cm) 12-31 inches (40-80cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Predominant sagebrush shape	Predominantly spreading shape[5]	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment

Attribute	Indicators	Desired Condition[7]	Reference
			Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Perennial grass cover[2] Arid sites[3] Mesic sites[4]	 ≥10% ≥15% Cool-season bunchgrasses preferred	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado. Cagney J., E. Bainter, B. Budd, T. Christiansen, V. Herren, M. Holloran, B. Rashford, M. Smith and J. Williams. 2010. Grazing influence, objective development, and management in Wyoming's Greater Sage-Grouse habitat. University of Wyoming College of Agriculture Extension Bulletin B-1203. Laramie.
	Perennial grass and forb height	Adequate nesting cover of ≥6" or as determined by ESD site potential and local variability	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Connelly, J. W., K. P. Reese, and M. A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. University of Idaho College of Natural Resources Experiment Station Bulletin 80. University of Idaho, Moscow, ID. Doherty, K.E., D.E. Naugle, J.D. Tack, B.L Walker, J.M. Graham and J.L. Beck. 2014. Linking Conservation Actions to Demography: Grass Height Explains Variation in Greater Sage-Grouse Nest Survival. Wildlife Biology, 20(6): 320-325. Hagen, C. A., J. W. Connelly, and M. A. Schroeder. 2007. A meta-analysis of Greater Sage-Grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. Wildlife Biology 13 (Supplement 1):42-50. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Perennial forb cover[2] Arid sites[3] Mesic sites[4]	 ≥5% ≥10%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
Brood-Rearing/Summer[1] (Seasonal Use Period June 16-October 31)			
Cover	% of Seasonal habitat meeting desired condition	>40% of the summer/brood habitat meets recommended brood habitat characteristics	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

Attribute	Indicators	Desired Condition[7]	Reference
		where appropriate (relative to ecological site potential, etc.)	
	Sagebrush cover[2]	5-25%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush height	4 to 32 inches (20.3-80cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Perennial grass cover and forbs[2]	>5% arid sites >10% mesic sites	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Riparian areas/mesic meadows[2]	Proper Functioning Condition	Preferred forbs are listed in Stiver et al. *In press.* Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.
	Upland and riparian perennial forb availability	Preferred forbs are common with several preferred species present	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press.* Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
Winter[1] (Seasonal Use Period November 1-February 28)			
Cover and Food	% of seasonal habitat meeting desired conditions	>80% of the wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.).	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush cover above snow[2]	>5%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press.* Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Sagebrush height above snow	>10 inches (>25cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

[1]Seasonal dates can be adjusted by local unit according to geographic region.
[2]Absolute cover is the actual recorded cover and can exceed 100% when recorded across all species and all layers. It is not relative cover, which is the proportions of each species, and equals 100%. Note that cover is reported for only those species (e.g., sagebrush, preferred forbs) that are sampled to determine suitability of habitat for sage-grouse. Overall cover at the site will be greater than that sampled for sage-grouse habitat, due to other species present.
[3]Arid corresponds to the 10 – 12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[4]Mesic corresponds to the ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[5]Collectively the indicators for sagebrush (cover, height, and shape), perennial grass and perennial forb (cover, height and/or availability) represent the desired condition range for nesting/early brood rearing habitat characteristics, consistent with the breeding habitat suitability matrix identified in Stiver et al. *In Press.* Sagebrush plants that are more tree or columnar-shaped provide less protective

Attribute	Indicators	Desired Condition[7]	Reference

cover near the ground than sagebrush plants with a spreading shape (Stiver et al. *In Press*). Some sagebrush plants are naturally columnar (e.g., Great Basin big sagebrush), and a natural part of the plant community. However, a predominance of columnar shape arising from animal impacts may warrant management investigation or adjustments at site specific scales.
[6]Preferred forbs are listed in Stiver et al. *In Press*. Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.
[7]All Desired Conditions will be dependent upon site capability and local variation (e.g., weather patterns, localized drought, ESD state, etc.).

Table 2-3. Seasonal Habitat Objectives for Greater Sage-Grouse NE Wyoming

Attribute	Indicators	Desired Condition[7]	References
Breeding Habitat (Lek and Nesting/Early Brood-Rearing)			Doherty. 2008. Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts. Holloran and Anderson. 2005. Spatial Distribution of Greater Sage-Grouse nests in relatively contiguous sagebrush habitats.
Lek Security	Proximity of trees	Trees absent or uncommon on shrub/grassland ecological sites within 1.86 miles (3 km) of occupied leks.	Baruch-Mordo, S., J. S. Evans, J. P. Severson, D. E. Naugle, J. D. Maestas, J. M. Kiesecker, M. J. Falkowski, C. A. Hagen, and K. P. Reese. 2013. Saving sage-grouse from trees. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Proximity of sagebrush to leks	Adjacent protective sagebrush cover within 328 ft. (100 m) of an occupied lek	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
Nesting/Early Brood-Rearing[5,10,12,13,14]			
Cover and Food	Seasonal habitat extent	>80% of the nesting habitat meets the recommended vegetation characteristics, where appropriate (relative to ecological site potential, etc.).	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

Attribute	Indicators	Desired Condition[7]	References
	Sagebrush cover[2]	5-25%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Connelly, J. W., K. P. Reese, and M. A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. University of Idaho College of Natural Resources Experiment Station Bulletin 80. University of Idaho, Moscow, ID. Hagen, C. A., J. W. Connelly, and M. A. Schroeder. 2007. A meta-analysis of Greater Sage-Grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. Wildlife Biology 13 (Supplement 1):42-50.
	Sagebrush height Arid sites[3] Mesic sites[4]	 4-31 inches (20.3-80cm) 12-31 inches (40-80cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Predominant sagebrush shape	Predominantly spreading shape[5]	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Perennial grass cover [2] Arid sites[3] Mesic sites[4]	≥10% ≥15% Cool-season bunchgrasses preferred	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado. Cagney J., E. Bainter, B. Budd, T. Christiansen, V. Herren, M. Holloran, B. Rashford, M. Smith and J. Williams. 2010. Grazing influence, objective development, and management in Wyoming's Greater Sage-Grouse habitat. University of Wyoming College of Agriculture Extension Bulletin B-1203. Laramie.

Attribute	Indicators	Desired Condition[7]	References
	Perennial grass height	Adequate nesting cover of >6" or as determined by ESD site potential and local variability	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Connelly, J. W., K. P. Reese, and M. A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. University of Idaho College of Natural Resources Experiment Station Bulletin 80. University of Idaho, Moscow, ID. Doherty, K.E., D.E. Naugle, J.D. Tack, B.L Walker, J.M. Graham and J.L. Beck. 2014. Linking Conservation Actions to Demography: Grass Height Explains Variation in Greater Sage-Grouse Nest Survival. Wildlife Biology, 20(6): 320-325. Hagen, C. A., J. W. Connelly, and M. A. Schroeder. 2007. A meta-analysis of Greater Sage-Grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. Wildlife Biology 13 (Supplement 1):42-50. Herman-Brunson, K.M., K.C. Jensen, N.W. Kaczor, C.C. Swanson, M.A. Rumble and R.W. Klaver 2009. Nesting Ecology of Greater Sage-Grouse *Centrocercus urophasianus* at the Eastern Edge of their Historic Distribution. Wildlife Biology 15: 237-246. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Perennial forb cover[2] Arid sites[3] Mesic sites[4]	 ≥5% ≥10%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Perennial forb availability	Preferred forbs are common with several species present	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
Late Brood-Rearing/Summer[1] (July-October)[1] (Apply to all habitat outside of nesting/breeding and winter)			

Attribute	Indicators	Desired Condition[7]	References
Cover and Food	Seasonal habitat extent	>40% of the summer/brood habitat meets recommended brood habitat characteristics where appropriate (relative to ecological site potential, etc.)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush cover[2]	5-25%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush height	4 to 32 inches (20.3-80cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Perennial grass cover [2,]	>15%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Upland and riparian perennial forb availability [2]	Preferred forbs are common with several preferred species present[6,]	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Riparian meadow habitat condition	Proper Functioning Condition	Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
Winter[1] November-March[1] (Apply to areas of known or likely winter-use)			
Cover and Food	Seasonal habitat extent	>80% of the wintering habitat meets winter habitat characteristics where appropriate (relative to ecological site, etc.).	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
	Sagebrush cover above snow[2]	>5%	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985. Stiver, S. J., E. T. Rinkes, D. E. Naugle, P. D. Makela, D. A. Nance, and J. W. Karl. *In Press*. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado.
	Sagebrush height above snow	>10 inches (>25cm)	Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

[1] Seasonal dates can be adjusted by local unit according to geographic region.

[2] Absolute cover is the actual recorded cover and can exceed 100% when recorded across all species and all layers. It is not relative cover, which is the proportions of each species, and equals 100%. Note that cover is reported for only those species (e.g., sagebrush, preferred forbs) that are sampled to determine suitability of habitat for sage-grouse. Overall cover at the site will be greater than that sampled for sage-grouse habitat, due to other species present.
[3] Arid corresponds to the 10 – 12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[4] Mesic corresponds to the ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al. *In Press*).
[5]Collectively the indicators for sagebrush (cover, height, and shape), perennial grass and perennial forb (cover, height and/or availability) represent the desired condition range for nesting/early brood rearing habitat characteristics, consistent with the breeding habitat suitability matrix identified in Stiver et al. *In Press*. Sagebrush plants that are more tree or columnar-shaped provide less protective cover near the ground than sagebrush plants with a spreading shape (Stiver et al. *In Press*). Some sagebrush plants are naturally columnar (e.g., Great Basin big sagebrush), and a natural part of the plant community. However, a predominance of columnar shape arising from animal impacts may warrant management investigation or adjustments at site specific scales.
[6] Preferred forbs are listed in Stiver et al. *In Press*. Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred.
[7]All Desired Conditions will be dependent upon site capability and local variation (e.g., weather patterns, localized drought, ESD state, etc.).

Management Actions and Allowable Uses

The decisions in Table 2-4 will guide the BLM's management but will be implemented as necessary through NEPA compliance on a site-specific basis. The decisions will be applied consistent with BLM's applicable statutory and regulatory authority.

Table 2-4. Management Actions and Allowable Uses

Action #	BLM Proposed Land Use Plan Amendments
	General Management Direction for Action Alternatives
1	Continue to support the development of statewide sage-grouse seasonal habitat models for the State of Wyoming.
2	Field offices and ranger districts will work with project proponents, partners, and stakeholders to avoid or minimize impacts and/or implement direct mitigation (e.g., relocating disturbance, timing restrictions, etc.), and utilize best management practices (BMP) and offsite compensatory mitigation where appropriate.
3	Utilize the Wyoming Sage-grouse Implementation Team (SGIT) and Local Working Group plans or other state plans, analyses, and other sources of information to guide development of conservation objectives for local management of sage-grouse habitats. The BLM will collaborate with appropriate federal agencies, and the State of Wyoming as contemplated under Governor Executive Order 2013-3, to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater Sage-Grouse conservation objectives are not being achieved on federal land, to determine if a causal relationship exists between improper grazing (by wildlife or wild horses or livestock) and Greater Sage-Grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater Sage-Grouse conservation objectives within the framework.
4	Include the collection of baseline data and outline post-project monitoring components into project planning, as appropriate and necessary.
5	The BLM will coordinate new recommendations, mitigation, and conservation measures applied for sage-grouse with the WGFD and other appropriate agencies, local government cooperators, and the Wyoming SGIT. These measures will be analyzed in site-specific NEPA documents, as necessary.

Action #	BLM Proposed Land Use Plan Amendments
6	Apply appropriate seasonal restrictions for implementing vegetation management treatments according to the type of seasonal habitats present in a priority area. Vegetation treatments must include monitoring to determine achievement of objectives and their long-term success.
7	Ensure site-specific, measurable, conservation and mitigation objectives are included in project planning within sage-grouse habitats.
8	Each BLM field office will develop landscape-scale restoration, conservation, and maintenance strategies, including special management of seasonal habitats and identified connectivity zones outside of PHMAs, working with voluntary partners and cooperating agencies. These strategies must be coordinated and reconciled, where possible, with adjoining management entities that share habitats or populations.
9	Design all range projects in a manner that minimizes potential for invasive species establishment. Monitor and treat invasive species associated with existing range improvements.
10	Apply all appropriate required design features (Appendix B) as mandatory Stipulations/Conditions of Approval (COA) within PHMAs for fluid minerals, travel management, lands and realty, range management, wild horses, coal exploration, locatable mineral location and entry, West Nile Virus, mineral materials, non-energy solid leasable minerals, vegetation management, fire and fuels management, and noise.
11	Integrated vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2. Manage weed treatments to maintain and improve Greater Sage-Grouse habitat. Apply Required Design Features and BMPs as Conditions of Approval, such as those in Appendix B.
12	Existing notices and approved plans of operations under 43 CFR 3809[1]: For projects that overlap PHMAs, operators may be requested to submit modifications to the accepted notice or approved plan of operations so that the operations minimally impact PHMAs (core only). The Authorized Officer (AO) may convey to the operator suggested conservation measures, based upon the notice or plan level operations and the geographic area of those operations (also called the project area, which is defined in 43 CFR 3809.5). These suggested conservation measures include measures that support the overall goals and objectives of the priority/core population area strategy and may not be reasonable or applicable to the BLM's determination of whether the proposed operations will cause unnecessary or undue degradation under 43 CFR 3809.5. The request containing the suggested conservation measures must make clear that the operator's compliance is not mandatory. Notices or plans of operation, or modifications thereto, submitted following the issuance of this guidance: As part of the 15-day completeness review of notices (or modifications thereto) and 30-day completeness review of plans of operations (or modifications thereto), the proposed project area(s) where exploration, development, mining, access and reclamation would take place should be reviewed for overlap of sage-grouse PHMAs in the corporate geographic information system (GIS) database. If there is overlap, the BLM AO may notify the operator of ways that they may minimize impacts to PHMAs (core only) and request the operator to amend its notice or plan to include such measures. The request to amend the submitted notice or plan of operations must make clear that the operator's compliance is not mandatory and that including such measures is not a requirement for completeness of either the notice or a plan of operations, nor is it a condition of acceptance of the notice or approval of the plan of operations.
13	As new occupied sage-grouse habitat is found or occurs either through additional inventories or expansion into previously unoccupied habitat, the BLM will incorporate, through appropriate processes and analyses, these areas into the GHMA category and manage them as such, until the

[1] *These regulations apply to the exploration and development of locatable minerals on placer claims and lode claims, as well as exploration on tunnel sites and mineral processing operations on mill sites The location and maintenance of claims and sites are regulated under 43 CFR Subpart 3830.*

Action #	BLM Proposed Land Use Plan Amendments
	earliest review occurs by the SGIT. At that time they will be considered for PHMA status or continue to be managed as GHMAs, and will be added to the statewide map at that time.
14	Contribute to actions that help to ground-truth the statewide sage-grouse seasonal habitat models for the State of Wyoming.
15	Use the Sage-grouse Habitat Assessment Framework or best available assessment tool (approved by the AO) when assessing or evaluating sage-grouse habitats at multiple scales.
16	The official Wyoming sage-grouse lek database is maintained by the WGFD in accordance with Appendix 4B of the Umbrella Memorandum of Understanding (MOU) between the WGFD and BLM (WGFD and BLM 1990). The MOU states that agencies will meet at least annually to coordinate and review the accuracy of data, and incorporate the most up-to-date information.
17	Many sage-grouse seasonal habitats within and outside of PHMAs (core only) are encumbered by valid existing rights, such as mineral leases or existing rights-of-way. Fluid mineral leases often will include less stringent lease stipulations than the timing, distance, and density requirements identified for consideration in this plan. The BLM will work with proponents holding valid existing leases that include less stringent lease stipulations than the timing, distance, and density restrictions described within this plan to ensure that measurable sage-grouse conservation objectives (such as, but not limited to, consolidation of infrastructure to reduce habitat fragmentation and loss, and effective conservation of seasonal habitats and habitat connectivity to support management objectives set by the WGFD) are included in all project proposals.
18	PHMAs would be designated as OHV Limited Areas. The OHV limitation would ultimately be to "Designated Routes" as determined through a subsequent implementation/activity level Travel Management Plan. In the interim, motorized use on existing routes may occur; however, no new routes may be created without specific authorization.
19	Complete activity-level travel plans within five years of the record of decision (ROD) for this planning effort. During activity level planning, where appropriate, designate routes in PHMAs with current administrative/agency purpose or need to administrative access only. Existing plans should be assessed for consistency with sage-grouse conservation objectives.
20	Construct roads needed for production activities to minimum design standards within PHMAs, in compliance with the Density and Disturbance Calculation Tool (DDCT) process.
21	Field office staff will work with project proponents (including those within the BLM) and the WGFD to site their projects in locations that meet the purpose and need for their project, utilize the DDCT, and have been determined to contain the least sensitive habitats.
22	Evaluate opportunities to coordinate management plans and strategies on multiple allotments where coordination under a single management plan/strategy would result in enhancing Greater Sage-Grouse populations or its habitat, as determined in coordination with the state wildlife agency and with project proponents, partners, and stakeholders.
23	Management Action 23 has been moved to Management Action 137.
24	Management Action 24 has been moved to Management Action 137.

Action #	BLM Proposed Land Use Plan Amendments
25	All existing LUP decisions will be retained unless vacated or modified by decisions in these LUP amendments. Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by these LUP amendments.
26	Fire and fuels management actions would be designed to contribute to the protection and enhancement of sagebrush habitat that support Greater Sage-Grouse populations (including large contiguous blocks of sagebrush).
27	BLM planning units (Districts), in coordination with the USFWS and relevant state agencies, would complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive Species Habitat Assessments to prioritize at-risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting Greater Sage-Grouse populations. These assessments and subsequent assessment updates would also be a coordinated effort with an interdisciplinary team (IDT) to take into account other Greater Sage-Grouse priorities identified in this plan. Appendix J describes a minimal framework example and suggested approach for this assessment. Implementation actions will be tiered to the Local (District) Greater Sage-Grouse Landscape Wildfire & Invasive Species Assessment using the best available science related to the conservation of Greater Sage-Grouse. In coordination with USFWS and relevant state agencies, the BLM planning units (Districts) will identify annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments. Annual treatment needs will be coordinated across state/regional scales and across jurisdictional boundaries for long-term conservation of Greater Sage-Grouse. These landscape assessment implementation efforts will be reviewed annually with appropriate USFWS and state agency personnel.
28	Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System (NFDRS) thresholds (fuel conditions, drought conditions, and predicted weather patterns) for Greater Sage-Grouse habitat.
29	Within acceptable risk levels, utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives across the range of sage-grouse habitat consistent with land use plan direction.
29a	In order to avoid surface-disturbing activities in PHMAs, priority will be given to development of oil and gas and other mineral resources outside of PHMAs, subject to applicable stipulations. When authorizing development of oil and gas and other mineral resources in PHMAs, subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse.
Lands and Realty Management	
Rights-of-Way (e.g., Power lines, Transmission, Wind Energy Projects)	
30	**<u>Specific to management for Greater Sage-Grouse, all RMPs are amended as follows:</u>** PHMAs would be managed as right-of-way (ROW) avoidance areas for new ROW or Special Use Authorization (SUA) permits (Map 2-13). Within PHMAs where new ROWs/SUAs are necessary, new ROWs/SUAs would be located within designated RMP corridors or adjacent to existing ROWs/SUAs where technically feasible. Subject to valid existing rights including non-federal land inholdings, required new ROWs/SUAs would be located adjacent to existing ROWs/SUAs or where it best minimizes sage-grouse impacts.

Action #	BLM Proposed Land Use Plan Amendments
	For values other than Greater Sage-Grouse, the following RMP decisions remain in effect: Portions of PHMAs would be managed as ROW exclusion areas (Map 2-9) in accordance with existing RMP decisions for resource values other than Greater Sage-Grouse.
31	**Specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Within GHMAs where new ROWs/SUAs are necessary, new ROWs/SUAs would be co-located within existing ROWs/SUAs where technically feasible. Appropriate sage-grouse seasonal timing constraints would be applied. **For values other than Greater Sage-Grouse, the following RMP decisions remain in effect:** Portions of GHMAs would be managed as ROW avoidance areas (Map 2-9) in accordance with existing RMP decisions for resource values other than Greater Sage-Grouse.
32	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** New Transmission Lines (greater than 115 kV): New transmission lines greater than 115 kV in PHMA (core only) would be allowed only (1) within the 2-mile wide transmission line route through PHMA (core only) population areas in south-central and southwestern Wyoming (see Map 2-15 from Executive Order (EO) 2011-5); (2) when located within 0.5 miles or less of an existing 115 kV or greater transmission line or; or (3) in designated RMP corridors authorized for above-ground transmission lines. Transmission lines routed using one or more of the three criteria listed above will not be counted against the DDCT 5% disturbance cap. New transmission lines greater than 115 kV proposed outside of these areas would be considered where it can be demonstrated that declines in sage-grouse populations could be avoided through project design and/or mitigation. These projects will be subject to the density and disturbance restrictions for PHMA. Construction of new transmission lines will adhere to the restrictions associated with conducting activities within PHMAs. Review of transmission line proposals would incorporate the Framework for Sage-grouse Impacts Analysis for Interstate Transmission Lines and other appropriate documents consistent with the three routing criteria described above. New projects within PHMAs that may require future utility lines, including distribution and transmission lines or pipelines, would include the proposed utility lines in their DDCT as part of the proposed disturbance. Lines permitted but not located in the above mentioned routes or a designated corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to the anticipated construction footprint or construction ROW width multiplied by length and includes all access roads, staging areas, and other surface disturbance associated with construction outside of the construction ROW). New Electric Distribution Lines (less than 115 kV): New electric distribution lines would be buried where feasible and economically feasible. If not economically feasible, distribution lines may be authorized when effectively designed/mitigated to protect Greater Sage-Grouse and the Authorized Officer determines that overhead installation is the action alternative with the fewest adverse impacts while still meeting the project need. Agricultural and residential lines will be considered to be adequately mitigated for Greater Sage-Grouse if constructed at least 0.6 mile from the lek perimeter with appropriate timing constraints and constructed to the latest APLIC standards. These ROW authorizations will be subject to approval by the State Director. Priority Transmission Lines:

Action #	BLM Proposed Land Use Plan Amendments
	PHMAs are designated as avoidance areas for high voltage transmission line and pipeline ROWs, except for the transmission projects specifically identified below. All authorizations in these areas, other than the excepted projects, must comply with the conservation measures outlined in this proposed plan, including the Required Design Features (RDF) and avoidance criteria presented in Appendix B of this document. The BLM is currently processing an application for Gateway South, Gateway West and TransWest Express and the NEPA review for these projects is well underway. The BLM is analyzing Greater Sage-Grouse mitigation measures through the project's NEPA review process. Pipelines: New pipelines through PHMAs would be allowed: (1) within an RMP corridor currently authorized for that use or designated through future RMP amendments; or (2) constructed in or adjacent to existing utilities (buried and above-ground) or roads. Pipelines constructed in RMP corridors or adjacent to existing utilities or roads will require completion of a DDCT analysis for baseline data collection but the project is not required to meet the threshold of 5%. However, within 6 months of the completion of construction, the project proponent will provide the AO with as-built drawings so that total disturbance within core area can be calculated annually. **The following RMP decisions remain in effect with the modification described above:** Casper RMP: No new corridor designations would be made in Bates Hole. When placement of a major ROW facility within a designated corridor is not possible, and for smaller ROW and other linear facilities, placement would be adjacent to existing facilities or disturbances. Cross-country placement of ROW and other linear facilities would be allowed only when placement in a designated corridor or adjacent to an existing facility is not practical or feasible. The extent of all surface disturbances would be minimized. No new corridors would be established in the Sand Hills Management Area (MA); ROWs would be allowed when management objectives for the area can still be achieved. All currently designated corridors would be maintained All special restrictions that apply to types of use/facilities on the corridors would be removed, except as noted for the Oregon Trail Road ROW Corridor, Segment A. The corridors include 351,020 acres, of which 94,580 acres are federal surface. The widths/size of designated corridors would not change. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis. Existing corridors include: 1. Oregon Trail Road Corridor, Segment A 2. Oregon Trail Road Corridor, Segment B 3. Oregon Trail Road Corridor, Segment C 4. Poison Spider/Gas Hills Road Corridor 5. Highway 20-26 Corridor 6. Wyoming Highway 259/U.S. 87 Corridor 7. Wyoming Highway 387 Corridor 8. Lost Cabin-Arminto Road Corridor 9. RMP Change No. 2012-03: included the 10. West wide Energy Corridor 11. Cabin Creek Corridor 12. Existing Oregon Trail Road ROW Corridor, Segment A

Action #	BLM Proposed Land Use Plan Amendments
	Oregon Trail Road ROW Corridor, Segment A allows additional ROW facilities provided they are subsurface, surface, or low profile developments. ROW facilities that introduce visual intrusions on the skyline along the corridor would not be allowed. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis, and a new corridor, to be called the Cabin Creek Corridor, would be designated. Future Corridor Adjustments and New Corridor Designations: Future corridor adjustments and new corridor designations would be made only when facility placement within an existing designated corridor is incompatible, unfeasible, or impractical and when the environmental consequences can be adequately mitigated. Problems of technical compatibility between facilities and spacing of facilities in corridors would be solved on a case-by-case basis. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis. South Bighorns/Red Wall Management Area: No corridors would be designated; however, ROWs would be allowed on a case-by-case basis when management objectives for the area could still be achieved. <u>Kemmerer RMP:</u> Utility corridors would be designated, based on use (i.e., power lines, pipelines, and fiber optic lines). Preferred utility corridors would be 2 miles wide (width would be determined based on resource values) and designated as follows, but variances would be allowed based on application where conflicts with other resources were minimal or could be mitigated through resource-specific stipulations: High-voltage power line corridors would be established north of and parallel to I-80, and along Wyoming State Highway 89 from the junction of I-80 and the Wyoming state line. Fiber optic and low-voltage power line corridors would be located along currently established road systems (e.g., interstate or state highways and paved county roads). <u>Newcastle RMP:</u> Utility/transportation systems would be located adjacent to existing utility/transportation systems whenever practical. Areas to be avoided for new facility placement and routes would be identified on a case-by-case basis, rather than attempting to establish utility corridors. <u>Pinedale RMP:</u> Utility facilities would be restricted to existing routes and designated corridors where practicable, including environmental and socioeconomic considerations. Corridor routes include U.S. Highways 189 and 191 and State Highways 189, 191, 350, 351, 352, 353, and 354. New corridors could be established as oil and gas fields are developed. <u>Rawlins RMP:</u> All BLM-administered public lands, except wilderness study areas (WSA) and some SD/MAs (including areas of critical environmental concern (ACEC)/Special Interest Areas (SIA)), would be open to consideration for placement of utility ROW systems. Each utility ROW would be located adjacent to existing facilities, when possible. Areas with important or sensitive resource values would be avoided. Existing major transportation and utility ROW routes would be designated corridors. However, major transportation routes within the planning area that are located east of the Carbon County-Albany County line would not be considered for ROW corridor designation because of the scattered public landownership pattern in the area. All corridors would be designated for power lines (above ground and buried), telephone lines, and fiber optic lines. Specific proposals would require site-specific environmental analysis and compliance with established permitting processes.

Action #	BLM Proposed Land Use Plan Amendments
	Activities generally excluded from ROW corridors include mineral materials disposal, range and wildlife habitat improvements involving surface disturbance and facility construction, campgrounds, and public recreation facilities and other facilities that would attract public use. ROW facilities would not be placed adjacent to each other if issues with safety or incompatibility or resource conflicts were identified. The designated width, allowable uses, and excluded uses for each corridor may be modified during implementation of the Approved RMP. Green River RMP: Areas designated as utility windows would be preferred locations for future grants. Five windows have been identified: 2 east-west, 3 north-south. Other areas would be considered for rights-of-way on a case-by-case basis. Windows 0.5 mile in width have been identified for the placement of utilities. The northern east-west window would be for underground facilities only, and the southern east-west window would be for both above and below ground facilities. A 0.5 mile wide north-south window on the west side of Flaming Gorge, a window south along Highway 430, and a north-south window along the east side of Flaming Gorge have been identified for above and below ground utilities. Jack Morrow Hills (JMH) Coordinated Activity Plan (CAP): The planning area, with the exception of defined exclusion and avoidance areas, would be open to considering grants of rights-of-way if area objectives could be met. Exclusion areas are closed to rights-of-way. Avoidance and special management areas not identified as exclusion areas would be open to consideration only after site-specific analysis demonstrates area objectives could be met (see glossary) in Greater Sage-Grouse potential nesting habitat.
33	No action
34	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Maintenance/replacement of existing structures would be allowed subject to valid and existing rights. Upgrades would be considered, subject to mandatory RDFs (Appendix B). Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to sage-grouse in flight. Power lines (distribution and transmission) will be designed to minimize wildlife related impacts and constructed to the latest APLIC standards. **Outside of PHMAs the following RMP decisions remain in effect:** Kemmerer RMP: New utility lines would be buried or BLM-approved anti-perch devices would be installed on all new utility lines within sagebrush and/or semiarid shrub-dominated habitats, unless NEPA analysis shows little or no impact without burial or modification.
35	Within PHMA where existing authorizations, ROWs, or SUAs have had some level of development (e.g., road, fence, and well) and are expired and are no longer in use, the site would be reclaimed by removing these features and restoring the habitat. Power lines (distribution and transmission) will be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.
Renewable Energy	
36	**Within PHMAs, all RMPs are amended as follows:** Wind energy development would be avoided in PHMAs (Map 2-33), and not allowed unless it can be sufficiently demonstrated that the development activity would not result in declines of PHMA populations. Sufficient demonstration of "no declines" should be coordinated with the WGFD and USFWS. **For values other than Greater Sage-Grouse, the following RMP decisions remain in effect:**

Action #	BLM Proposed Land Use Plan Amendments
	Areas that are currently unavailable (Map 2-29) due to the need to protect sensitive resources would remain unavailable to wind energy development[1].
37	No action
38	**Within PHMAs, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** The use of guy wires for meteorological towers (MET) tower supports would be avoided within PHMAs. All existing and any new unavoidable guy wires should be marked with recommended bird deterrent devices. The siting of new temporary MET towers within PHMAs would be avoided within 2 miles of occupied sage-grouse leks, unless they are out of the direct line of sight of the occupied lek. **Outside of PHMA the following RMP decisions remain in effect:** Kemmerer RMP: New MET towers would be avoided within 1 mile of occupied sagebrush obligate habitats, unless anti-perch devices are installed. MET towers relying on guy wires for support would be prohibited in these habitats. Exceptions could be made if NEPA analysis shows little or no impact to sagebrush obligate species. Rawlins RMP: MET towers would be authorized on a case-by-case basis from 0.25 mile to 1 mile of an occupied Greater Sage-Grouse and sharp-tailed grouse lek.
39	No action
Land Tenure Adjustments (Acquisitions, Land Exchanges, Transfers and Sales)	
40	**Within PHMAs and GHMA, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** Lands classified as PHMAs for Greater Sage-Grouse would be retained in federal management unless: (1) the agency can demonstrate that disposal of the lands will provide a net conservation gain to the Greater Sage-Grouse or (2) the agency can demonstrate that the disposal of the lands will have no direct or indirect adverse impact on conservation of the Greater Sage-Grouse. Exceptions would be considered where there is mixed ownership and land exchanges would allow for additional or more contiguous federal ownership patterns within PHMAs. For PHMAs with minority federal ownership, an additional, effective mitigation agreement would be included for any disposal of federal land. As a final preservation measure, consideration should be given to pursuing a permanent conservation easement. For lands in GHMAs that are identified for disposal, the BLM will only dispose of such lands consistent with the goals and objectives of this plan, including, but not limited to, the LUP goal to conserve, recover, and enhance sage-grouse habitat on a landscape scale. **For values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: 224,830 acres of public lands are identified as potentially suitable for disposal. At the implementation stage, site-specific analysis with public participation will be conducted. Based on the analysis and public comments received, a determination will be made on whether disposal of the parcel is in the public's best interest. If it is not in the public's best interest, the parcel will be retained in public ownership.

Action #	BLM Proposed Land Use Plan Amendments
	Restricted Disposal – dispose of 5,450 acres on a restricted basis. Allow land-use authorizations under FLPMA Section 302(b) leases and permits to meet public demand. Evaluate on a case-by-case basis as proposals are presented. Potential lease and permit areas may include, but are not limited to the following: • Areas where there are documented or existing trespass facilities that can be resolved by an authorization under this section • Areas along major highways where developments may facilitate public needs • Areas in or adjacent to residential, agricultural, commercial, or industrial developments. The BLM will pursue acquisition of lands and interest in lands in the South Bighorns/Red Wall area.
41	**Within PHMAs and GHMA, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** Areas where acquisitions (including subsurface mineral rights) or conservation easements would benefit sage-grouse habitat would be identified. **Outside of PHMA and GHMA, and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: The BLM would pursue acquisition of lands and interest in lands in the Bolton Creek Drainage and Bates Creek areas.
42	Sage-grouse habitat requirements would be utilized to prioritize parcels for exchange or acquisition within PHMAs.
43	Within PHMAs, non-mineral withdrawals would be evaluated to determine if the withdrawal action is consistent with sage-grouse conservation.
	Livestock Grazing Management
44	The BLM policy in WO-IM-2009-007 and BLM Handbook H-4180-1 would be used to evaluate land health standards achievement in PHMAs (core only) and, where not achieved, to determine if existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines, which through this process will identify appropriate actions to address non-achievement and non-conformance. When determining appropriate actions to address non-achievement of land health standards and non-conformance with the guidelines due to existing grazing management practices or levels of grazing use, management actions including but not limited to the following would be considered singly or in combination: 1. Season or timing of use 2. Numbers of livestock (includes temporary non-use or livestock removal) 3. Distribution of livestock use 4. Intensity of use 5. Kind of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats) 6. Class of livestock (e.g., yearlings versus cow calf pairs) 7. Range improvements. Refer to the document, "Grazing Influence, Management, and Objective Development in Wyoming's Greater Sage-Grouse Habitat" (Cagney et al. 2010) for guidance when considering appropriate management actions to achieve conformance.

Action #	BLM Proposed Land Use Plan Amendments
45	Within PHMAs the BLM would work cooperatively with permittees, lessees, and other landowners to develop voluntary grazing management strategies that integrate both public and private lands into single management units to improve sage-grouse habitat.
Livestock Grazing Permit Monitoring	
46	**The following RMP decisions remain in effect:** Casper RMP: Grazing leases would be adjusted where an evaluation of monitoring, field observations, or other data indicate changes, and either increases or decreases, in forage allocation are needed or when necessary or required by other applicable law or regulation. Kemmerer RMP: Vegetative communities would be managed in accordance with Wyoming Standards for Healthy Rangelands. Appropriate livestock grazing management actions would be developed and integrated to address rangeland health standards, improve forage for livestock, and enhance rangeland health. Newcastle RMP: Any adjustments in livestock grazing use would be made as a result of monitoring and consultation with grazing permittees. Monitoring studies would be conducted using the current BLM-approved methodology. Pinedale RMP: Monitoring of the range and the vegetation resource would be conducted at a level sufficient to detect changes in grazing use, trend, and range conditions. Monitoring would be tied to land health standards and indicators that help determine change in status and progress toward meeting objectives. Data would be used to direct and support grazing management decisions consistent with national policy. Rawlins RMP: Livestock grazing would be managed to meet the Wyoming Standards for Healthy Rangelands. Green River RMP/JMH CAP: The kinds and seasons of livestock grazing use would continue to be licensed until monitoring, negotiation, consultation, or a change in resources conditions indicate that a modification is needed. Monitoring would be continued or initiated following adjustments in grazing use to assure that grazing and other management objectives are being met.
47	No action
Permit Renewals	
48	Within PHMAs, all BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives. If monitoring data show the habitat objectives have not been met nor progress being made towards meeting them, there will be an evaluation and a determination made as to the cause. If it is determined that the authorized use is a cause, the use will be adjusted by the response specified in the instrument that authorized the use. The NEPA analysis for renewals and modifications of livestock grazing permits/leases that includes lands within SFAs and PHMAs will include specific management thresholds based on Greater Sage-Grouse habitat objectives (Tables 2-2 and 2-3), Land Health Standards (43 CFR 4180.2)

Action #	BLM Proposed Land Use Plan Amendments
	and ecological site potential, and one or more defined responses that will allow the authorizing officer to make adjustments to livestock grazing that have already been subjected to NEPA analysis.
49	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** BLM monitoring would be used to evaluate progress toward achieving land health standards within PHMAs and, where not achieved, to determine if existing grazing management practices or levels of grazing use on public lands are significant factors in failing to meet, maintain or make progress towards achieving the standards and conform with the guidelines, which through this process will identify appropriate actions to address non-achievement and non-conformance. Allotments within SFAs, followed by those within PHMAs, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision. The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in SFAs followed by PHMAs outside of the SFAs. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Conversions in kinds of livestock and changes in season of use would be considered on a case-by-case basis through an environmental analysis. Such changes will be consistent with rangeland health objectives. Grazing leases will be adjusted to accurately reflect the kind of livestock use on public land in all allotments. Kemmerer RMP: Current amounts, kinds, and seasons of livestock grazing uses would be authorized until rangeland health standards assessment results and (or) monitoring indicates a grazing use adjustment is necessary, or that a kind and (or) class of livestock or season of use modification can be accommodated. Newcastle RMP: Any adjustments in livestock grazing use would be made as a result of monitoring and consultation with grazing permittees. Monitoring studies would be conducted using the current BLM-approved methodology. Pinedale RMP: Conversions from one type of livestock to another would be evaluated on a case-by-case basis, including an environmental analysis, and would be authorized in conformance with the goals and objectives of the RMP. Rawlins RMP: The current amounts, kinds, and seasons of livestock grazing use would be authorized until monitoring, field observations, ecological site inventory, or other data acceptable to BLM indicates a grazing use adjustment is needed, as appropriate. Requests for changes in season-of use or kind-of-livestock would be considered on a case-by-case basis. Any decision regarding changes in grazing use would include cooperation, consultation, and coordination with the grazing permittees and the interested public. Green River RMP:

Action #	BLM Proposed Land Use Plan Amendments
	The Wyoming Standards for Healthy Rangelands (BLM 1997a) would apply to all resource uses on BLM-administered lands. These standards are the minimal acceptable conditions that address the health, productivity, and sustainability of the rangeland. The standards describe healthy rangelands rather than rangeland by-products. Achievement of a standard is determined through observing, measuring, and monitoring appropriate indicators. An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity, and distribution) can be observed, measured, or monitored based on sound scientific principles. The standards will direct the management of public lands and focus the implementation of this activity plan toward the maintenance or attainment of healthy rangelands.
50	Within PHMAs, at the time a permittee or lessee voluntarily relinquishes a permit or lease (see Grazing Relinquishment in the Glossary), the BLM will consider whether the public lands where that permitted use was authorized should remain available for livestock grazing or be used for other resource management objectives, such as reserve common allotments or fire breaks.
51	No action
52	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** When periods of drought occur, where appropriate, the AO would evaluate strategies to address drought through coordination with grazing permittee/lessee and annual billings processes. In cooperation with livestock grazing permittees/lessees, drought contingency plans would be developed at the appropriate landscape unit that provide for a consistent/appropriate BLM response. Contingency plans should establish strategies for addressing ongoing drought and post-drought recovery. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Other management considerations for use of stock driveway withdrawals (SDW) would include providing emergency use for relief from fire, drought, or other natural causes or to meet management objectives in adjoining allotments that require rest. These other uses would be addressed on a case-by-case basis and may occur any time during the year provided the AO has determined adequate forage is available and it does not interfere with regular trail use. The decision determining there is adequate forage would be documented and filed in the appropriate SDW file. Consultation and coordination with livestock owners who regularly use the respective SDW would be made prior to authorizing this type of use. This use would be authorized in accordance with federal grazing regulations.(also see Management Action 54) A drought contingency plan would be developed to maintain adequate habitat components for viable fish, wildlife, and Special Status Species populations.
Range Development Projects	
53	**Specific to management for all Greater Sage-Grouse Habitat, all RMPs are amended as follows:** In GHMAs and PHMAs, existing range improvements (e.g., fences, livestock/wildlife watering facilities) would continue to be evaluated and modified when necessary. The potential risk to Greater Sage-Grouse and its habitats from existing structural range improvements would be evaluated. The potential for modification of those structural range improvements identified as posing a risk would be addressed.

Action #	BLM Proposed Land Use Plan Amendments
	Supplements and supplemental feeding would continue to be authorized where appropriate. **Outside of PHMA and GHMA, and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Identified hazard fences would be modified and new fences would be constructed in accordance with the BLM Fencing Handbook 1741-1. Decision 4010. Placement of salt, mineral, or forage supplements for livestock would not be allowed within 0.25 mile of water, wetlands, and riparian areas, unless written analysis shows that watershed, riparian, wetland, wildlife, and vegetative values would not be adversely impacted. Forage supplements would be required to be "certified weed-free." Kemmerer RMP: BLM fencing standards would be applied to newly constructed fences on BLM-administered lands within the planning area. Existing fences would be eliminated or modified to reduce conflicts on a case-by-case basis. Livestock salt or mineral supplements would be located a minimum of 0.25 mile away from water sources, riparian areas, and aspen stands. Buffers would be based on resource concerns on a case-by-case basis. Newcastle RMP: Fence construction would be required to meet current BLM fence standards. Fences on BLM-administered public land surface that cause documented wildlife conflicts would be removed, reconstructed, or modified, as appropriate or necessary, to eliminate or reduce the conflict. Construction of fences that interfere with movements of big game species in crucial big game winter range would not be allowed on BLM-administered public land surface. Pinedale RMP: Mineral supplement blocks would be placed in locations that promote proper grazing distribution and prevent inappropriate livestock use on riparian habitat; for example, by locating supplements on ridgetops and/or approximately 0.25 mile from riparian habitat. Placement of supplements near water sources, such as wells and reservoirs, would consider rangeland objectives, such as grazing distribution, wildlife habitat requirements, and reclamation success. Mineral supplement blocks would not be placed within 0.25 mile of an occupied sage-grouse lek. Mineral supplement blocks would not be placed within 0.25 mile of known Special Status Plant Species locations. Rawlins RMP: New fence construction would be authorized according to BLM standards unless modified following consultation with affected parties. Existing fences would be modified according to current BLM standards and according to wildlife and livestock management needs. Green River RMP/JMH CAP: Where documented wildlife conflicts with fencing on public lands occur, fences would be modified, reconstructed, or, if necessary, removed. Herding control of livestock would be encouraged as an alternative to fencing. Fence construction would be in accordance with BLM design standards and located so as not to overly impede wildlife movement. Consideration would also be given to Special Status Species and wild horse movement. Green River RMP:

Action #	BLM Proposed Land Use Plan Amendments
	Livestock water developments and range improvements would be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species would be required. Water developments and/or range improvements proposed in sensitive areas would be considered only if wildlife habitat and resource conditions are maintained or improved and no significant or irreversible adverse effects would occur. Salt or nutritional supplements would be prohibited within 500 feet of riparian habitat and National Historic and Scenic Trails unless analysis shows that these resources would not be adversely affected. These supplements also would be prohibited on areas inhabited by special status plant species. Placement of supplements at least 500 feet away from wells, troughs, and other human-made water sources would be encouraged to better distribute livestock. JMH CAP: Livestock water developments and range improvements would be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species would be required. Water developments and/or range improvements proposed in sensitive areas would be considered only if wildlife habitat and resource conditions were maintained or improved and no significant or irreversible adverse effects would occur. Salt or nutritional supplements would be prohibited within 500 feet of riparian habitat and National Historic and Scenic Trails unless analysis shows that these resources would not be adversely affected. These supplements also would be prohibited on areas inhabited by special status plant species. Placement of supplements at least 500 feet away from wells, troughs, and other human-made water sources would be encouraged to better distribute livestock.
Livestock Trailing	
54	**Within PHMAs, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** Livestock trailing that is authorized would include a trailing plan to utilize non-habitat to the extent possible, include specific routes and timeframes for trailing, utilize existing trails, and avoid stopovers on occupied leks, as appropriate. **The following RMP decisions remain in effect with the modification described above:** Casper RMP: The revocation of withdrawals for those trails that are no longer active would be reviewed and recommended and these lands would be incorporated into adjacent allotments (46,050 acres). Grazing leases would be offered to the respective grazing lessees. All remaining SDW lands for trail use (55,680 acres) would be retained. Kemmerer RMP: Current livestock trails would be retained. Livestock trailing use would occur within 0.5 mile of the mapped centerline. Pinedale RMP: Adequate stock trails would be maintained to support livestock trailing needs.
Riparian Area Management	
55	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Grazing between riparian habitats and upland habitats would be balanced to promote the production and availability of beneficial forbs to Greater Sage-Grouse for use during nesting and brood-rearing. Grazing in meadows, mesic habitats, and riparian pastures also would be balanced to

Action #	BLM Proposed Land Use Plan Amendments
	promote the production and availability of beneficial grasses and forbs for use during late brood-rearing within PHMAs, while maintaining upland conditions and functions. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Lotic and lentic wetland/riparian areas would be managed toward Proper Functioning Condition (PFC). The BLM would manage toward PFC and identified Desired Plant Community (DPC) on 350 miles of lotic and adjacent riparian habitat and 10,000 acres of lentic habitat to meet fish, wildlife, and Special Status Species habitat requirements. Kemmerer RMP: Livestock conversions would be allowed in allotments with riparian concerns only when a plan is approved to address riparian issues. Management actions and range improvements proposed to address riparian issues would have to be implemented prior to authorizing the conversion. Livestock conversions may be approved only after completion of a suitability study for the conversion. The conversion may be authorized if it is determined that riparian habitats will be maintained or improved by the conversion. Pinedale RMP: Meet the Wyoming Standards for Rangeland Health and maintain or enhance wetland and riparian vegetation to achieve Proper Functioning Condition. Grazing systems will be designed to maintain or improve watershed and range condition; for example, through changing seasons of use, implementing rotational or other grazing management systems, or developing infrastructure for livestock management. In allotments with riparian habitat, grazing management actions will be designed to maintain or achieve proper functioning condition. Green River RMP: Range improvements will be directed at resolving or reducing resource concerns, improvement of wetland/riparian areas, and overall improvement of vegetation/ground cover. New range improvements may be implemented in "I" and "M" category allotments. Maintenance of range improvements will be required in accordance with the BLM Rangeland Improvement Policy. JMH CAP: Implementation of grazing management systems will assist in improving or maintaining the desired range condition. Approved AMPs, or other activity plans intended to serve as the functional equivalent to an AMP, for each of the designated grazing allotments will provide the necessary guidance for achieving grazing management objectives. Appropriate actions for improving degraded rangeland and riparian habitat (i.e., meeting Wyoming Standards for Healthy Rangelands (BLM 1997a)) could include, but will not be limited to, reduction of permitted animal unit months (AUM), modified turnout dates, livestock water developments, range improvements, modified grazing periods, growing season rest, riparian pastures, exclosures, implementation of forage utilization levels, and livestock conversions. These improvements will be considered individually using the method outlined in Appendix 2 of the JMH CAP ROD to ensure conformance with management objectives for the planning area and other resource values.
56	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Range improvement projects would be planned and authorized in a way that contributes to rangeland health and maintains and/or improves Greater Sage-Grouse and its habitat.

Action #	BLM Proposed Land Use Plan Amendments
	Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above: Green River RMP: Water sources may be developed in crucial wildlife winter ranges only when consistent with wildlife habitat needs. Such sources will be designed to benefit livestock, wild horses, and wildlife. Alternative water supplies or facilities for livestock may be provided to relieve livestock grazing pressure along stream bottoms and improve livestock distribution. JMH CAP: Livestock water developments and range improvements will be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species will be required. Water developments and/or range improvements proposed in sensitive areas (Map 4) will be considered only if wildlife habitat and resource conditions are maintained or improved and no significant or irreversible adverse effects will occur.
57	Existing water developments associated with springs and seeps would be evaluated and associated pipelines/structures to those developments having a negative effect on PHMAs would be modified.
Minerals Management	
Exceptions to lease stipulations, Conditions of Approval, and terms and conditions	
58	Exceptions waivers, and modifications to lease stipulations, COAs, and terms and conditions (T&C), etc. for sage-grouse would continue to be considered on a case-by-case basis consistent with approved LUPs and other BLM policy and regulations as they relate to exceptions within PHMAs and GHMAs.
Fluid Minerals Unleased Estate	
59	No action
60	**Within PHMAs, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** The BLM would allow oil and gas leasing consistent and subject to the leasing stipulations analyzed in the timing, distance, disturbance, and density restrictions sections (Map 2-8)(see Appendix E – Fluid Mineral Stipulations). **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Fluid mineral leasing would be allowed in PHMAs (core only), except in areas that are closed to leasing due to the need to protect other sensitive resources (Map 2-4).
61	A minimum lease size of 640 contiguous acres of federal mineral estate would be applied within PHMAs. Preliminary parcels reviewed for possible offering in a lease sale should comply with this minimum lease size. Expressions of interest that are less than this minimum lease size would be evaluated and modified by the BLM to meet the minimum lease size, where possible, prior to review for possible offering in a lease sale.

Action #	BLM Proposed Land Use Plan Amendments
62	**Within PHMAs, specific to management for Greater Sage-Grouse , all RMPs are amended as follows:** Geophysical exploration projects that are designed to minimize habitat fragmentation within PHMAs would be allowed, except where prohibited or restricted by existing LUP decisions, and in conformance with timing and distances stipulations (see actions 129 through 134). **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: The blocks of public land identified as mapped in the Casper Field Office GIS database will be managed to retain intact blocks of native vegetation (192,550 acres, of which 131,880 acres are BLM-administered surface). In these areas, the following restrictions apply: 1. These blocks are (1) unavailable for oil and gas leasing and (2) a geophysical operation on public surface for the life of the plan. Activities for existing oil and gas leases are managed intensively (see Appendix U of the Casper RMP). Existing leases will be allowed to expire and not be renewed. 2. Within these blocks, a withdrawal from the operation of the public land laws, including the mining laws will be pursued. 3. These blocks are closed to mineral material disposal. Existing permits will be allowed to expire without renewal or expansion. 4. These blocks are not open to wind/renewable energy development. 5. These blocks remain open to livestock grazing. 6. All allowed surface-disturbing activities within the designated blocks are subject to a Controlled Surface Use (CSU) restriction, minimizing surface disturbance to meet management objectives. Decision 4024 The North Platte River Special Recreation Management Area (SRMA) will continue to be open to oil and gas leasing and geophysical operations. Decision 7039 The area is unavailable for oil and gas leasing and geophysical exploration is not allowed. Decision 7047 The MA is unavailable for new oil and gas leasing. No geophysical operations will be allowed on public surface. Activities on existing leases will be managed intensively to meet the objectives of the MA (see Appendix U of the Casper RMP– Intensive Management). To minimize surface-disturbing activities, oil and gas exploration and development will use directional drilling techniques and well twinning whenever practicable. Decision 7059 The Red Wall/Gray Wall complex is located entirely within the South Bighorns/Red Wall MA and is unavailable for new oil and gas leasing. No geophysical operations will be allowed on public surface. Activities on existing leases will be intensively managed to meet the objectives of the MA (see Appendix U of the Casper RMP– Intensive Management). To minimize surface-disturbing activities, oil and gas exploration and development will use directional drilling techniques and well twinning whenever practicable. Decision 7063 Those lands currently open to oil and gas leasing will continue to be open to geophysical operations. Those lands open to oil and gas leasing, but subject to a No Surface Occupancy (NSO) restriction, may be open to geophysical operations should site specific NEPA analysis disclose a finding of no significant impact. No geophysical operations are allowed in areas closed for oil and gas leasing. Decision 2019 Kemmerer RMP: Allow for geophysical exploration on lands throughout the planning area subject to identified conditions of approval. Newcastle RMP: Surface-disturbing and disruptive activities associated with all types of minerals exploration and development and with geophysical exploration will be subject to appropriate mitigation measures determined through, but not limited to, use of the Wyoming BLM Mitigation Guidelines.

Action #	BLM Proposed Land Use Plan Amendments
	Pinedale RMP: Vehicle-based geophysical activities will be assessed on a case-by-case basis. The use of surface and/or above-ground (Poulter shot) explosive charges for geophysical exploration will be assessed case by case. Geophysical projects, including projects proposed in areas with an NSO restriction, will be analyzed and mitigation developed on a case-by-case basis. Geophysical activities that are considered casual use actions are allowed within 0.25 mile of active sage-grouse leks provided that: • Operations are conducted on designated roads and trails. • Operations during the breeding season (March 1 through May 15) are conducted between the hours of 8:00 a.m. and 8:00 p.m. • A 150-foot wide strip of undisturbed sagebrush is maintained around the perimeter of the lek for hiding and escape cover. Rawlins RMP: All lands open to oil and gas leasing consideration will also be open to geophysical exploration, subject to appropriate resource surveys, surface protection measures, adequate bonding, and adherence to State of Wyoming standards for geophysical operations. Vehicular use for "necessary tasks" (as defined in the glossary), such as geophysical exploration including project survey and layout, will be permitted except where specifically prohibited (e.g., some SD/MAs). Green River RMP: Geophysical exploration (vehicles and detonation) activities will be prohibited within 0.5 mile of the Pinnacles Geologic Feature. Areas of sensitive heritage resources and geologic features, such as Boars Tusk, White Mountain Petroglyphs, special status plant species, WSAs, and historic trails, will remain closed. Receiver lines may be laid using foot traffic within these areas. Exceptions to these restrictions may be granted on a case-by-case basis subject to appropriate site-specific analysis and mitigation requirements. The remainder of the planning area will be open to geophysical exploration, with application of appropriate mitigation. Rights-of-way limitations in the planning area apply to on- and off-road vehicle traffic used for geophysical activities. Exploration activities will be allowed in sensitive resource areas only if they can be performed with acceptable mitigation of impacts. JMH CAP: Geophysical exploration (vehicles and detonation) activities will be prohibited within 0.5 mile of the Pinnacles Geologic Feature. Areas of sensitive heritage resources and geologic features, such as Boars Tusk, White Mountain Petroglyphs, special status plant species, WSAs, and historic trails, will remain closed. Receiver lines may be laid using foot traffic within these areas. Exceptions to these restrictions may be granted on a case-by-case basis subject to appropriate site-specific analysis and mitigation requirements. The remainder of the planning area will be open to geophysical exploration, with application of appropriate mitigation. Rights-of-way limitations in the planning area apply to on- and off-road vehicle traffic used for geophysical activities. Exploration activities will be allowed in sensitive resource areas only if they can be performed with acceptable mitigation of impacts.
Fluid Minerals Leased Estate	
63	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** In cases where federal oil and gas leases have been issued with stipulations varying from those in Appendix E for the protection of sage-grouse or their habitats, as provided in the applicable LUP decision, as revised or amended, their inclusion as APD COAs would be considered when approving exploration and development activities through completion of the environmental record of review (43 CFR 3162.5 and 36 CFR 228.108), including appropriate documentation of compliance with NEPA.

Action #	BLM Proposed Land Use Plan Amendments
	Overall consideration shall be given to minimizing the impact to sage-grouse through a project design that avoids, minimizes, reduces, rectifies, and/or adequately compensates for direct and indirect impacts to PHMAs or use and includes applicable and technical COAs. Selection and application of these measures shall be based on current science and research on the effects to important breeding, nesting, brood-rearing, and wintering areas. For proposed operations in PHMAs, the Surface Use Plan of Operations (see 43CFR 3162.3-1(f)) shall address, at a minimum, the anticipated noise, density and amount of disturbance, mechanical movement (e.g., pump jacks), permanent and temporary facilities, traffic, phases of development over time, offsite mitigation, and expected periods of use associated with the proposed project. Seasonal habitats or project features related to potential sage-grouse impacts that are not addressed in the Surface Use Plan of Operations based on site-specific or project-specific considerations shall be noted in the project file, along with a rationale for not including them. In this process the BLM would evaluate, among other things: 1. Whether the conservation measure is "reasonable" (43 CFR 3101.1-2) and consistent with valid existing rights 2. Whether the action is in conformance with the approved LUP; and the effectiveness of the proposed mitigation measures. The BLM would work with project proponents in these situations to promote measurable sage-grouse conservation objectives such as, but not limited to, consolidation of project related infrastructure to reduce habitat fragmentation and loss and to promote effective conservation of seasonal habitats and PHMAs (connectivity only) that support population management objectives set by the state. The BLM would continue to work with project proponents and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats (based on vegetation, topography, or other habitat features) and resources whether inside or outside of PHMAs (utilizing DDCT analysis process). Valid existing rights would be recognized and respected. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Kemmerer RMP: Choose and implement appropriate mitigation in a timely manner to minimize decreases in habitat function. Utilize appropriate voluntary offsite compensatory mitigation to reduce impacts. This would be necessary if (1) all onsite mitigation has been accomplished and adverse effects have not been mitigated; or (2) if onsite mitigation is not feasible. Pinedale RMP: Offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as mitigation for proposed activities within the planning area. Proposed offsite mitigation will be described and analyzed for effectiveness in detail on a project-specific basis. Offsite mitigation would conform to requirements in the Pinedale RMP regarding the order of use of mitigation methods, stipulations applied to offsite mitigation measures, and priority order for mitigating resource impacts onsite or offsite. Green River RMP: Development actions will be analyzed on a case-by-case basis to identify mitigation needs to meet RMP objectives, provide for resource protection, and provide for logical development. Limitations on the amount, sequence, timing, or level of development may occur. This may result in transportation planning and in limitations in the number of roads and drill pads, or deferring development in some areas until other areas have been restored to previous uses. JMH CAP: COAs attached to an APD will be based on site-specific NEPA or other analysis and will establish specific, necessary mitigation measures not covered by stipulations for resource and environmental protection. Some areas will need more intensive mitigation measures to protect sensitive resources and provide for public health and safety. These intensive mitigation measures or COAs will mostly apply to areas with overlapping sensitive resources (e.g., Areas 2 and 3). Examples of intensive mitigation that can apply to all activities based on site-specific analysis include

Action #	BLM Proposed Land Use Plan Amendments
	offsite placement of facilities, remote control monitoring, restricted or prohibited surface use including road construction, multiple wells from a single pad, central tank batteries/facilities, and pipelines and power lines concentrated in specific areas. In addition, refer to Section 3.12.3 for additional mitigation measures that may apply as part of the transportation plan.
64	Within PHMAs, field offices would work with project proponents (including those within BLM) to site their projects in locations that minimize impacts to sensitive resources.
65	No action
66	Master Development Plans would be considered and encouraged for projects involving multiple proposed disturbances within PHMAs.
67	Within PHMAs, unitization would be encouraged as a means of minimizing adverse impacts to sage-grouse to reduce fragmentation and surface disturbing and disruptive activities. Require unitization when deemed necessary for proper development and operation of an area or to facilitate more orderly (e.g., phased and/or clustered) development as a means of minimizing adverse impacts to resources, including Greater Sage-Grouse, so long as the unitization plan adequately protects the rights of all parties, including the United States.
68	The BLM should closely examine the applicability of categorical exclusions in PHMAs and GHMAs. If extraordinary circumstances review is applicable, the BLM should determine whether those circumstances exist. For proposed actions in PHMAs, determine whether a categorical exclusion is applicable and if so, closely examine the extraordinary circumstances, if applicable, to determine whether one or more exists that would require preparation of a NEPA analysis. If a categorical exclusion applies, and no extraordinary circumstances exist, determine whether preparing a NEPA analysis would help inform decisionmaking.
69	Federal Regulations, 43 CFR 3104.1 requires that a bond be furnished before any drilling or surface disturbance activities begin. The lessee, sublessee or the operator must furnish a surety or personal bond in the amount of at least $10,000 to ensure compliance with all the lease terms, including protection of the environment. With the consent of the surety and principal, the operator may use the bond of another party, such as the lessee. Each time there is a new operator, that operator must notify the BLM that he/she is the responsible operator, giving the particulars of the bond under which he/she will operate. The BLM can require an increase in a bond amount any time conditions warrant such an increase. Per 36 CFR 228.109, as part of the review of a proposed surface use plan of operations, the authorized forest officer shall consider the estimated cost to the Forest Service to reclaim those areas that would be disturbed by operations and to restore any lands or surface waters adversely affected by the lease operations after the abandonment or cessation of operations on the lease. If at any time prior to or during the conduct of operations, the authorized forest officer determines the financial instrument held by the Bureau of Land Management is not adequate to ensure complete and timely reclamation and restoration, the authorized forest officer shall give the operator the option of either increasing the financial instrument held by the Bureau of Land Management or filing a separate instrument with the Forest Service in the amount deemed adequate by the authorized forest officer to ensure reclamation and restoration. The authorized forest officer shall consider the costs of the operator's proposed reclamation program and the need for additional measures to be taken when estimating the cost to the Forest Service to reclaim the disturbed area. A reclamation bond would be required on all projects that is commensurate with the scope, scale, size of the project within PHMAs. Partial bonding may be appropriate depending on these factors.
70	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Produced water from coalbed natural gas (CBNG) wells will be treated and disposed of in collaboration and consistent with the requirements of the state, and required design features specified in Management Action 10 (see Appendix B).

Action #	BLM Proposed Land Use Plan Amendments
	Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above: Pinedale RMP: Produced water from CBNG wells will be treated and disposed of in collaboration and consistent with the requirements of the state.
71	**Specific to management for Greater Sage-Grouse , within PHMA (core only), all RMPs are amended as follows:** Where the federal government owns the mineral estate, and the surface is in non-federal ownership, apply the same stipulations, COAs, and/or conservation measures and RDFs applied if the mineral estate is developed on BLM-administered lands in that management area, to the maximum extent permissible under existing authorities, and in coordination with the landowner. **Within PHMAs (non-core only) and outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Pinedale RMP: BLM-permitted actions on split estate lands are subject to the same stipulations as leased federal mineral estate on federal surface lands, provided the stipulations do not adversely affect the surface owner's land use or actions. Exceptions to surface development restrictions could be granted if requested or agreed to by the surface owner.
72	Within PHMAs where the federal government owns the surface and the mineral estate is in non-federal ownership, apply appropriate surface use COAs, stipulations, and mineral RDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.
73	No action
74	No action
Solid Leasable Minerals	
75	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR 3461.5. PHMA is essential habitat for maintaining Greater Sage-Grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1). **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: If coal development potential is shown to exist, all BLM-administered lands outside the Coal Development Potential Area (CDPA) will be considered for coal leasing, unless specifically closed to mineral leasing. The coal-screening process will be completed on all newly identified lands having coal development potential. All BLM-administered lands within the CDPA identified in the 2001 Buffalo RMP maintenance action are acceptable for further consideration for coal leasing. The only exceptions are those lands determined unacceptable within the area. The coal unsuitability criteria are re-evaluated whenever new coal lease applications are received.

Action #	BLM Proposed Land Use Plan Amendments
	Kemmerer RMP: Process new coal lease applications by using the coal screening process. The coal screening process results will determine which lands may be available for further consideration for coal leasing and development. Appropriate NEPA analysis would be required prior to leasing. Federal land within the proposed Haystack project area is determined acceptable for further consideration for coal leasing and development. No coal LBAs will be considered for Rock Creek/Tunp and Bear River Divide management areas. Pinedale RMP: Decisions on lands acceptable for leasing consideration for coal development will be made after an application is received and the coal screening process is conducted. Rawlins RMP: Federal coal lease applications will be accepted only on those federal coal lands with development potential identified as suitable for further leasing consideration after application of the coal unsuitability criteria (the above-mentioned approximately 51,250 acres and 2,318.7 million tons of surface minable federal coal). Green River RMP/JMH CAP: Federal coal lands within the Coal Occurrence and Development Potential area (about 422,000 acres) are open to further consideration for coal leasing and development (i.e., new competitive leasing, emergency leasing, lease modifications, and exchange proposals, under the Federal Coal Management Program) with appropriate and necessary conditions and requirements for protection of other land and resource values and uses.
76	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Upon receipt of a coal lease application proposing underground mining methods that include surface operations and impacts within PHMAs, Criterion 15 would be applied and the area would be identified as suitable for further coal leasing consideration after consultation with the state and, where applicable, surface management agency to determine that all or certain stipulated methods of coal mining will not have a significant long-term impact on sage-grouse. Stipulated methods may include, but not limited to, underground mining methods with no placement of surface facilities. Unsuitability is not applied to underground operations without surface impacts (43 CFR 3461.1) This would be consistent with Instruction Memorandum (IM) WY WY-2012-019 says that the BLM will assess potential impacts to sage-grouse through the NEPA process, and that the state regulatory agency would apply this mitigation, as well as protective measures consistent with the state policy for solid leasable mining action at the permitting stage. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: If coal development potential is shown to exist, all BLM-administered lands outside the CDPA will be considered for coal leasing, unless specifically closed to mineral leasing. The coal-screening process will be completed on all newly identified lands having coal development potential. All BLM-administered lands within the CDPA identified in the 2001 Buffalo RMP maintenance action are acceptable for further consideration for coal leasing. The only exceptions are those lands determined unacceptable within the area. The coal unsuitability criteria are re-evaluated whenever new coal lease applications are received. Kemmerer RMP:

Action #	BLM Proposed Land Use Plan Amendments
	Process new coal lease applications by using the coal screening process. The coal screening process results will determine which lands may be available for further consideration for coal leasing and development. Appropriate NEPA analysis would be required prior to leasing. Federal land within the proposed Haystack project area is determined acceptable for further consideration for coal leasing and development. No coal LBAs will be considered for Rock Creek/Tunp and Bear River Divide management areas. Pinedale RMP: Decisions on lands acceptable for leasing consideration for coal development will be made after an application is received and the coal screening process is conducted. Rawlins RMP: Federal coal lease applications will be accepted only on those federal coal lands with development potential identified as suitable for further leasing consideration after application of the coal unsuitability criteria (the above-mentioned approximately 51,250 acres and 2,318.7 million tons of surface minable federal coal). Green River RMP/JMH CAP: Federal coal lands within the Coal Occurrence and Development Potential area (about 422,000 acres) are open to further consideration for coal leasing and development (i.e., new competitive leasing, emergency leasing, lease modifications, and exchange proposals, under the Federal Coal Management Program) with appropriate and necessary conditions and requirements for protection of other land and resource values and uses.
77	Coal exploration activities could be allowed in PHMAs if they can be completed in compliance to surface occupancy and disturbance and density stipulations analyzed through the DDCT process.
Solid Leasable Minerals (Other than Coal and Oil Shale)	
78	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** All non-energy leasable mineral activities would be considered in PHMAs, provided that the activities can be completed in compliance to surface occupancy and disturbance and density stipulations (Map 2-28) analyzed through the DDCT process. Exploration licenses and prospecting permits would be considered with appropriate mitigating measures. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Portions of PHMAs would be unavailable for leasing (Map 2-24) in accordance with existing RMP decisions for resource values other than Greater Sage-Grouse. Kemmerer RMP: Sodium: All public lands (outside of the Raymond Mountain WSA and exceptions identified below) within the planning area are available for sodium leasing consideration. Exploration for sodium will be considered on a case-by-case basis. Limited surface occupancy criteria contained in the Sodium Mineral Development Environmental Assessment will be applied on a case-by-case basis. No new sodium leases or exploration licenses may be issued on lands within the Raymond Mountain WSA. No new sodium exploration and leasing will be considered for Rock Creek/Tunp and Bear River Divide management areas. Phosphate: All public lands (outside of the Raymond Mountain WSA and exceptions identified below) within the planning area are available for phosphate leasing consideration. Exploration for phosphate will be considered on a case-by-case basis. No new phosphate exploration and leasing will be considered for Rock Creek/Tunp and Bear River Divide management areas.

Action #	BLM Proposed Land Use Plan Amendments
	Pinedale RMP: Should interest in other leasable minerals materialize in the future, leasing will be considered on a case-by-case basis, and the RMP will be amended as appropriate and necessary. The same surface disturbance restrictions will be used in analyzing leasing proposals and determining the issuance of any leases (for example, geothermal steam, coal, sodium, oil shale, and phosphate). Green River RMP/JMH CAP: The known sodium leasing area is open to exploration and consideration for leasing and developments, but is closed to prospecting permits. The remainder of the planning area is open to sodium prospecting except for areas that are closed to mineral leasing, surface mining, or mechanical prospecting type activities (areas closed to drilling, off road vehicle use, and explosive charges). Sodium (trona) leasing will be considered on a case-by-case basis, and is subject to the same conditional requirements as oil and gas and coal, and the general management direction applied in this RMP.
Locatable Mineral Activities	
79	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** 252,160 acres within SFAs (see management action 139 for identification of SFAs) would be recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights. 894,060 acres would be considered for recommendation for withdrawal from mineral entry, based on risk to sage-grouse and its habitat from conflicting locatable mineral location and entry. A total of approximately 20,357,630 acres are open to locatable mineral location and entry (Map 2-23).Operators may be requested to submit modifications to the accepted notice or approved plan of operations so that the operations minimally impact PHMAs. The AO may convey to the operator suggested conservation measures, based upon the notice or plan level operations and the geographic area of those operations [also called the project area which is defined in 43 CFR 3809.5 and 36 CFR 228.3. These suggested conservation measures include measures that support the overall goals and objectives of the core population area strategy, though measures listed for protection of sage-grouse breeding, nesting, brood-rearing, and wintering may not be reasonable or applicable to the BLM's determination of whether the proposed operations will cause unnecessary or undue degradation under 43 CFR 3809.5 and 36 CFR 228.3. The request containing the suggested conservation measures must make clear that the operator's compliance is not mandatory. Notices or Plans of Operation, or modifications thereto, submitted following the issuance of this guidance: As part of the 15 day completeness review of notices [or modifications thereto] and 30 day completeness review of plans of operations [or modifications thereto], the proposed project area(s) where exploration, development, mining, access and reclamation would take place should be reviewed for overlap of PHMAs in the corporate GIS database. If there is overlap, the BLM AO may notify the operator of ways that they may minimize impacts to PHMAs and request the operator to amend its notice or plan to include such measures. The request to amend the submitted notice or plan of operations must make clear that the operator's compliance is not mandatory and that including such measures is not a requirement for completeness of either the notice or a plan of operations, nor is it a condition of acceptance of the notice or approval of the plan of operations. **For values other than Greater Sage-Grouse, the following RMP decisions remain in effect:** 1,785,230 acres are withdrawn from mineral entry for the protection of sensitive resources (see Map 2-19).
Salable Minerals	
80	PHMAs would be open to mineral material exploration, sales, and free use permits, except in areas that are unavailable due to the need to protect other resource values (Map 2-14).

Action #	BLM Proposed Land Use Plan Amendments
	All salable mineral activities within PHMAs would be considered, provided they can be completed in compliance within surface occupancy, seasonal restrictions, and disturbance and density stipulations (Map 2-18 and Management Actions 126,127,129 through134) analyzed through the DDCT process.
81	Within PHMAs closure and restoration of salable mineral pits no longer in use would be considered to meet sage-grouse habitat conservation objectives. Emphasis would be given to reclamation/restoration of PHMAs as a viable long term goal to improve sage-grouse habitat.
	Recreation and Visitor Services
Outdoor Recreation Management	
82	**Specific to management for Greater Sage-Grouse or PHMA, all RMPs are amended as follows:** BLM Special Recreation Permits (SRP) would be allowed in PHMAs, unless negative impacts to sage-grouse cannot be adequately mitigated. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: The entire planning area will remain open to dispersed recreation. The camping limit on public lands is set by BLM policy and is currently limited to 14 days. Emphasis will be placed on providing interpretive and information signs and materials for public land visitors, maintaining existing facilities to a high standard consistent with the recreational setting, and limiting development of additional facilities to those areas where public recreational use of surrounding public lands requires. Work with state, local groups, and adjacent landowners will be conducted to identify and develop recreational trails, both motorized and non-motorized, when the opportunities presents themselves. SRPs will be allowed for commercial, noncommercial, and competitive events on a case-by-case basis. Cooperation will be maintained with a variety of user groups, especially in the local area, to provide diverse recreational opportunities for enjoyment of public lands. BLM will pursue acquisition of lands and interest in lands in the Rattlesnake Range and Pine Ridge areas, as well as promote and support recreation-based tourism. Kemmerer RMP: Allow dispersed recreation and permit special recreational activities (e.g., outfitting and guiding permits and off-highway vehicle (OHV) events permitted on an annual basis after evaluation). Green River RMP: Special recreation permits will be considered on a case-by-case basis. Appropriate mitigation will be included in special recreation permits, commercial recreation uses, and major competitive recreation events to provide resource protection and public safety. JMH CAP: Special recreation use permits for managed activities that occur in the JMH CAP planning area will be reviewed and subject to recommendations made by the Rock Springs Field Office. This will allow the Rock Springs Field Office to track the amount, location, and timing of organized activity occurring within the planning area to monitor resource pressure. The permit evaluation process will consider the nature of the event, potential impacts to resources, conflicts with other events, and impacts to the quality of other visitors' experiences. Mitigation measures necessary to protect the resources will be included in any permit issued. A plan of operation will be required for all commercial recreational operators and outfitters. The plan will describe the type, extent, and location of the recreation use and the mechanisms by which the operator/outfitter will prevent impacts to environmental resources. Any requests in special recreation use permit applications to remove natural resources will be evaluated on a case-by-case basis after an environmental analysis process.

Action #	BLM Proposed Land Use Plan Amendments
82a	In PHMAs, do not construct new recreation facilities (e.g., campgrounds, trails, trailheads, staging areas) unless the development would have a net conservation gain to Greater Sage-Grouse habitat (such as concentrating recreation, diverting use away from critical areas, etc.), or unless the development is required for visitor health and safety or resource protection.
83	No action
	Special Designations and Other Management Areas
84	New sage-grouse conservation ACECs would not be designated.
85	No action
	Travel Management
86	**Specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** 1. Within PHMAs, designate the non-sand dune portions of the following OHV Open Areas as OHV Limited Area. The OHV limitation would ultimately be to "Designated Routes" as determined through a subsequent implementation/activity level Travel Management Plan. In the interim, motorized use on existing routes may occur; however, no new routes may be created without specific authorization: Rawlins Field Office: Dune Pond Cooperative Management Area. 2. Rock Springs Field Office: Portion of the Greater Sand Dunes Recreation Area. **The following RMP decisions remain in effect:** The Casper Field Office Poison Spider OHV Park (290 acres) would remain as an "open" OHV area.
87	Within PHMAs and GHMAs, all motorized use (of which OHVs are a subset) would be limited to designated routes. Route designations will occur in subsequent implementation/activity level Travel Management Plans. In the interim motorized use on existing routes may occur; however, no new routes may be created without specific authorization. In PHMAs and GHMAs, temporary closures will be considered in accordance with 43 CFR subpart 8364 (Closures and Restrictions); 43 CFR subpart 8351 (Designated National Area); 43 CFR subpart 6302 (Use of Wilderness Areas, Prohibited Acts, and Penalties); 43 CFR subpart 8341 (Conditions of Use). Temporary closure or restriction orders under these authorities are enacted at the discretion of the Authorized Officer to resolve management conflicts and protect persons, property, and public lands and resources. Where an Authorized Officer determines that off-highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence. (43 CFR 8341.2) A closure or restriction order should be considered only after other management strategies and alternatives have been explored. The duration of temporary closure or restriction orders should be limited to 24 months or less; however, certain situations may require longer closures and/or iterative temporary closures. This may include closure of routes or areas.
88	New primary and secondary roads would be avoided within 1.9 miles of the perimeter of occupied sage-grouse leks within PHMAs. All new roads would be prohibited within 0.6 miles of the perimeter of occupied sage-grouse leks within PHMAs.

Action #	BLM Proposed Land Use Plan Amendments
89	Within PHMAs, no upgrading of existing routes that would change route category or capacity would be allowed unless the upgrading would have minimal impact on sage-grouse in PHMAs, was necessary for motorist safety, or eliminated the need to construct a new road.
90	In PHMAs, existing roads or realignments would be used to access valid existing rights that are not yet developed. If valid existing rights could not be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the PHMA.
91	**Specific to management for Greater Sage-Grouse or PHMA, all RMPs are amended as follows:** For roads, primitive roads and trails not designated in travel management plans within PHMAs, natural reclamation of roads and trails would be allowed in appropriate situations where additional resource damage is not foreseeable. This would include primitive route/roads that were not designated in wilderness study areas and within lands with wilderness characteristics that have been selected to be managed to retain those characteristics for protection. In PHMAs, locate new roads that will have relatively high levels of activity (accessing multiple wells, housing development) greater than 1.9 miles from the perimeter of occupied Greater Sage-Grouse leks. Locate new other roads used to provide facility site access and maintenance >0.6 miles from the perimeter of occupied Greater Sage-Grouse leks. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Kemmerer RMP: Roads and two-track routes determined to be unauthorized or redundant and unnecessary for resource management purposes will be reclaimed to achieve surrounding native conditions. Rawlins RMP: Roads or trails that are eroding beyond a reasonable level will be fixed or closed. JMH CAP: Transportation planning will provide for access to achieve multiple-use goals while providing maximum protection for crucial habitats and sensitive resources and will consider: Closing and rehabilitating unused roads and trails and those causing resource damage. This will be subject to county review of existing rights-of-way needs.
92	Within PHMAs, when reseeding roads and trails, appropriate seed mixtures would be used and the use of transplanted sagebrush would be considered.
	Vegetation Management
93	Within PHMAs and GHMAs, the BLM would manage for vegetation composition and structure that reflects ESD or other methods that reference site potential or comparable standard to achieve sage-grouse and other resource objectives.
94	Within PHMAs in northeast Wyoming (as mapped in WY EO 2011-5), vegetation treatments in nesting and wintering habitat that would reduce sagebrush canopy to less than 15% would not be conducted.

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95	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** For vegetation treatments in sagebrush within PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated) and BLM Washington Office Instruction Memorandum 2013-128 (Sage-grouse Conservation Related to Wildland Fire and Fuels Management). These recommended protocols would be used in determining whether proposed treatment constitutes a "disturbance" that would contribute toward the 5% threshold within PHMA maintenance. Additionally, these protocols would be used to determine whether the proposed treatment configuration would be expected to have neutral or beneficial impacts for PHMA (core only) populations or if they represent additional habitat loss or fragmentation. Treatments to enhance sagebrush/grasslands habitat for sage-grouse would be evaluated based upon habitat quality and the functionality/use of treated habitats post-treatment. The BLM would work collaboratively with partners at the state and local level to maintain and enhance sage-grouse habitats. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Green River RMP: Prescribed burns generally will be conducted in areas having greater than 35% sagebrush composition, 20% desirable grass composition, and greater than 10 inches of precipitation. Other vegetation manipulation methods will be considered on a case-by-case basis depending on objectives and cost benefits. Casper RMP: Decision 4053: The areas (Bates Hole and Fish Creek/Willow Creek) will have priority for vegetative treatments to improve sage-grouse habitats and for vegetation monitoring to ensure residual herbaceous vegetation is maintained for nesting cover on public lands.
96	For vegetation treatments in sagebrush within PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated). These recommended protocols, subject to seasonal conditions of approval, would be used in determining whether proposed treatment constitutes a "disturbance" that would contribute toward the 5% threshold for habitat maintenance. Additionally, these protocols would be used to determine whether the proposed treatment configuration would be expected to have neutral or beneficial impacts for PHMA (core only) populations or if they represent additional habitat loss or fragmentation. Treatments to enhance sagebrush/grasslands habitat for sage-grouse would be evaluated based upon habitat quality and the functionality/use of treated habitats post-treatment. The BLM would work collaboratively with partners at the state and local level to maintain and enhance sage-grouse habitats. Seasonal restriction would be applied, as needed, for implementing fuels management treatments according to the type of seasonal habitat present.
97	Within PHMA grazing would be deferred on treated areas for two full growing seasons unless vegetation objectives or vegetation recovery indicates a shorter or longer rest period is necessary based on vegetation monitoring results.
98	For vegetation treatments in sagebrush within PHMAs, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated).

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Vegetation Reclamation	
99	Reclamation of surface disturbances in PHMAs would be consistent with the Wyoming Reclamation Policy (BLM 2009a), vegetation objectives (Table 2-2 and 2-3) and Appendix C. A monitoring plan would be developed for each restoration or reclamation project and reporting progress and changes in resource condition.
100	Areas for vegetation restoration and/or restoration criteria that include state sage-grouse conservation plans and appropriate local information would be identified. The use of native plants and seeds for restoration would be required unless the probability for success is low (non-native plants and seeds may be used as long as they meet sage-grouse habitat objectives), and restoration management would be designed to obtain long-term persistence based on ESD. Reestablishment of sagebrush cover and desirable understory plants would be the highest priority for restoration efforts. Landscape patterns that most benefit sage-grouse would be restored and created, considering potential changes in climate.
101	Within PHMAs, implementation of restoration projects would be prioritized based on environmental variables that improve chances for project success in areas most likely to benefit sage-grouse. Restoration would be prioritized in seasonal habitats that are thought to be limiting sage-grouse distribution and/or abundance.
102	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Where probability of success or native seed availability is low or where there is a specific identified purpose that cannot be met with natives, non-native seeds could be used provided they meet sage-grouse habitat conservation and vegetation (see Tables 2-2 and 2-3) objectives. The use of native seeds for fuels management treatment would be prioritized based on availability, adaptation (site potential), and probability of success. Where probability of success or native seed availability is low, non-native seeds may be used to meet Greater Sage-Grouse habitat objectives to trend toward restoring the fire regime. When reseeding, use fire resistant native and non-native species, as appropriate, to provide for fuel breaks. Native seed allocation would be prioritized for use in sage-grouse habitat. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Kemmerer RMP: Require the use of certified weed-free seed and mulch for rehabilitation projects. Pinedale RMP: Disturbed areas will be reclaimed to native site plant composition. If reclamation of original plant composition is impossible or not desirable, reclamation will achieve a native plant community that meets the Wyoming Standards for Rangeland Health.
103	Post emergency stabilization and rehabilitation (ES&R) and burn area emergency rehabilitation BAER management would be designed to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse, and travel management, etc., to achieve and maintain the desired condition of ES&R and BAER projects to benefit sage-grouse (Eiswerth and Shonkwiler 2006).

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104	The role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to PHMAs would be evaluated to determine if they should be restored to sagebrush or habitat of higher quality for sage-grouse. If these seedings are part of an AMP or if they provide value in conserving or enhancing the rest of the PHMAs (core only), no restoration would be necessary. The compatibility of these seedings for sage-grouse habitat or as a component of a grazing system would be assessed during the land health assessments (Davies et al. 2011).
105	Priority would be given for implementing specific sage-grouse habitat restoration projects in areas invaded by annual grasses first to sites that are adjacent to or surrounded by PHMAs. Areas invaded by annual grasses would be second priority for restoration when the sites are not adjacent to PHMAs, but are within 2 miles of PHMAs. The third priority for areas invaded by annual grasses habitat restoration projects would be sites beyond 2 miles of PHMAs. The intent would be to focus restoration outward from existing, intact habitat.
106	In fire prone areas where sagebrush seed is required for sage-grouse habitat restoration, the BLM would consider establishing seed harvest areas that are managed for seed production and are a priority for protection from outside disturbances.
107	Vegetation treatment proposals must include evaluation of soils, precipitation, invasive/exotic plants, as well as the current condition of PHMAs. Avoid aerial pesticide/herbicide spraying in favor of ground applications to minimize drift into non-target areas in Greater Sage-Grouse habitat unless benefits of treatments are likely to outweigh impacts.
Grasshopper/Mormon Cricket Control and Management	
108	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** The BLM could implement treatments within PHMAs where outbreaks of grasshopper or Mormon cricket populations are expected to rise above economic levels. Treatments must be conducted only following reduced agent-area treatments (RAATS) protocols. The BLM would work collaboratively with partners at the federal, state, and local levels, including the Wyoming Weed and Pest Districts within the counties where the treatment is to occur, to maintain and enhance sage-grouse habitats in a manner consistent with the core population area strategy for conservation. The BLM would be directed to utilize the Wyoming Grasshopper and Mormon Cricket Control website as a resource for updated information when conducting analysis of grasshopper and Mormon cricket control in sage-grouse habitats. Avoid aerial pesticide/herbicide spraying in favor of ground applications to minimize drift into non-target areas in Greater Sage-Grouse habitat unless benefits of treatments are likely to outweigh impacts. **Outside of PHMA/or and for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Work with Animal and Plant Health Inspection Service (APHIS) to control outbreaks of grasshoppers and Mormon crickets on public lands in the planning area in accordance with the MOU between U.S. Department of the Interior and APHIS.
Wild Horse Management	
109	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:**

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	Within PHMAs, the BLM would review and consider amending BLM Herd Management Area Plans (HMAP) to incorporate sage-grouse habitat objectives and management considerations for all BLM herd management areas (HMA). **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Green River RMP/JMH CAP: Specific habitat objectives for herd management areas would be developed. Consideration will be given to desired plant communities, wildlife, watershed, livestock grazing, and other resource needs.
110	PHMA (core only) management objectives would be considered when evaluating appropriate management levels (AML).
111	PHMA (core only) management objectives would be considered when conducting land health assessments in BLM HMAs.
112	When conducting NEPA analysis for wild horse management activities, water developments or other rangeland improvements for wild horses in PHMAs, the direct and indirect effects to sage-grouse populations and habitat would be addressed. Water developments or rangeland improvements would be implemented using the criteria identified for domestic livestock identified above in PHMAs.
113	Coordinate with other resources (Range, Wildlife, and Riparian) to conduct land health assessments within all BLM HMAs.
	Wildland Fire and Fuels Management
114	In PHMAs, fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems and enhancing and protecting future sagebrush ecosystems (refer to WGFD Protocols for Treating Sagebrush to Benefit Sage-grouse [WGFD 2011, as updated]) and Appendix A. These recommended protocols would be used in determining whether proposed treatment constitutes a "disturbance" that will contribute toward the 5% threshold for habitat maintenance. Fuel treatments would be designed through an interdisciplinary process to expand, enhance, maintain, and protect Greater Sage-Grouse habitat. Green strips (using native fire resistant/resilient species) and/or fuel breaks would be used, where appropriate, to protect seeding efforts from subsequent fire events. In coordination with the USFWS and relevant state agencies, BLM planning units (Districts) with large blocks of Greater Sage-Grouse habitat would develop, using the assessment process described in Appendix J, a fuels management strategy which considers an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and sage-grouse ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity, where appropriate. When developing this strategy, planning units would consider the risk of increased habitat fragmentation from a proposed action versus the risk of large scale fragmentation posed by wildfires if the action is not taken. Utilizing an interdisciplinary approach, a full range of fuel reduction techniques would be available. Fuel reduction techniques such as grazing, prescribed fire, chemical, biological, and mechanical treatments would be acceptable. Upon project completion, fuels projects would be monitored and managed to ensure long-term success, including persistence of seeded species and/or other treatment components. Invasive vegetation post-treatment would be controlled. Wildfire prevention plans would be developed that explain the resource value of sage-grouse habitat and include fire prevention messages and actions to reduce human-caused ignitions.

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115	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Burned areas that are within PHMAs would be restored. Wildfire burns will be treated as disturbed if sagebrush is reduced below 5% unless there is an implementation plan outlining restoration efforts and 3 years of data showing a trend back to suitable habitat. The BLM could bring in burned area rehabilitation (BAR) and BAER teams who would work collaboratively with partners at the federal, state, and local level to rehabilitate and restore sage-grouse habitats in a manner consistent with the core habitat population area strategy for conservation. DDCT reviews would be conducted in coordination with the WGFD Habitat Protection Program located in Cheyenne, Wyoming at the WGFD headquarters. Areas within PHMAs would be high priority for restoration of sage-grouse habitat beyond immediate response. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Kemmerer RMP: Implement BLM Emergency Stabilization and Rehabilitation standards located in the Department of the Interior (DOI) Interagency Burned Area Emergency Response Guidebook and BLM Burned Area Emergency Stabilization and Rehabilitation Handbook on wildland fires to protect and sustain healthy ecosystems and protect life and property. Newcastle RMP: All wildfires will be evaluated to determine the need for rehabilitation or restoration measures. Restoration of burned areas will be by natural succession unless a special need is identified to prevent further resource damage. Rawlins RMP: Rehabilitation and restoration efforts specific to a fire event will be undertaken to protect and sustain ecosystems, public health and safety, and to help communities protect infrastructure.
116	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** For fuels management, the BLM would consider multiple tools for fuels reduction and would analyze in NEPA compliance documentation before electing to implement prescribed fire in PHMAs. If prescribed fire is used in Greater Sage-Grouse habitat, the NEPA analysis for the Burn Plan will address: • Why alternative techniques were not selected as a viable options • How Greater Sage-Grouse goals and objectives would be met by its use • How the COT Report objectives would be addressed and met • A risk assessment to address how potential threats to Greater Sage-Grouse habitat would be minimized. Prescribed fire as a vegetation or fuels treatment shall only be considered after the NEPA analysis for the Burn Plan has addressed the four bullets outlined above. Prescribed fire could be used to meet specific fuels objectives that would protect Greater Sage-Grouse habitat in PHMAs (e.g., creation of fuel breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer reduction treatments, used as a component with other treatment methods to combat annual grasses and restore native plant communities). Prescribed fire in known winter range shall only be considered after the NEPA analysis for the Burn Plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat would need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality. Refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-grouse (WGFD

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	2011, as updated) and BLM Washington Office Instruction Memorandum 2013-128. If prescribed fire activities are not in compliance with these protocols, the treatment would be considered a PHMA disturbance. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Use prescribed burning to achieve measurable 5th-order watershed objectives from (1) other resources, including, but not limited to, forestry, wildlife, range, vegetation, and watershed; (2) the reduction of hazardous fuels; and (3) the introduction of fire into fire-adapted ecosystems. Green River RMP/JMH CAP: Prescribed fire will generally be the preferred method of vegetation manipulation to convert decadent stands of brushland to grasslands and to stimulate sprouting of old, decadent aspen stands and/or shrub species. Prescribed burns are preferred in areas having greater than 35% sagebrush composition, 20% desirable grass composition, and greater than 10 inches of precipitation. Rawlins RMP: Fuel treatments, including prescribed fire, mechanical, chemical, and biological treatments will be used for fuels reduction and to meet other multiple-use resource objectives, including returning fire to its natural role in the ecosystem. Wildland urban interfaces (WUI) and communities at risk will receive priority for fuels reduction.
117	Within PHMAs, post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants (while controlling for erosion and treating infestation of invasive plant species), to return to suitable sage-grouse habitat.
118	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** Remove conifers encroaching into sagebrush habitats. Prioritize treatments closest to occupied sage-grouse habitats and near occupied leks, and where juniper encroachment is phase 1 or phase 2. Use of site-specific analysis and principles like those included in the FIAT report (Chambers et. al., 2014) and other ongoing modeling efforts to address conifer encroachment will help refine the location for specific priority areas to be treated. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Treat woodland encroachment in grassland, sagebrush, aspen, and other vegetative communities where it is determined to be detrimental to other resource values or uses. Manage 630,180 acres of sagebrush communities toward DPC.
119	**The following RMP decisions remain in effect for both PHMAs and GHMAs:** Pinedale RMP: In the WUI or industrial interface, fuels reduction methods best suited to the area will be used to reduce the risk of catastrophic fire to these areas. Casper RMP: Use prescribed burning to achieve measurable 5th-order watershed objectives from (1) other resources, including, but not limited to, forestry, wildlife, range, vegetation, and watershed; (2) the reduction of hazardous fuels; and (3) the introduction of fire into fire-adapted ecosystems.

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	Utilize an integrated management technique approach (defined as prescribed fire, mechanical, chemical, or biological, followed by desired reseeding) to reduce fuels to protect high priority areas or resource values defined as, but not limited to the following: • Urban and industrial interface areas • Developed recreation areas • Commercial timber areas • Wildlife habitats • Range-improvement facilities • Communication sites • Municipal watersheds. Decision 3008 Fuels Management. <u>Rawlins RMP:</u> A high priority for fire management activities will be given to areas identified as communities at risk, industrial interface areas, and areas containing resource values considered high priority within the RMP planning area. <u>JMH CAP:</u> Appropriate management response to protect the basin big sagebrush/lemon scurfpea plant communities will be applied. Wildland and prescribed fires will be managed in all vegetation types to maintain or improve biological diversity and the overall health of the public lands. In particular, plant species and age class diversity will be a priority; thus, appropriate management response (AMR) for all wildland fires will be identified and implemented depending on the resources and management objectives for the area. Suppression techniques and hazardous fuels reduction activities will be identified to reduce wildland fire severity and occurrence on portions of the landscape where fire could cause undesirable changes in plant community composition and structure. A site-specific analysis will be prepared for sensitive resource areas, such as special status plant species sites, heritage sites, historic trails, and ACECs, to determine the type of fire suppression activity that will be acceptable. Fire equipment and fire suppression techniques, such as vegetation clearing, will be limited to existing roads and trails in special status plant species habitat. As appropriate, the Fire Management Plan will be updated to reflect the appropriate suppression activity in sensitive resource areas.
120	No action
121	No action
122	No action
123	No action
124	**<u>Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:</u>** Fire fighter and public safety would be the highest priority. Greater Sage-Grouse habitat (PHMA) would be prioritized commensurate with property values and other important habitat to be protected, with the goal to restore, enhance, and maintain areas suitable for Greater Sage-Grouse. Greater Sage-Grouse habitat. (GHMA) would be prioritized commensurate with local fire plans, property values and other important habitat to be protected, with the goal to restore, enhance, and maintain areas suitable for Greater Sage-Grouse. Within PHMAs (and Priority Areas for Conservation (PAC), if so determined by individual LUP efforts) would be the highest priority for conservation and protection during fire operations and fuels management decisionmaking. The PHMAs (and PACs, if so determined by individual LUP efforts) would be viewed as more valuable than GHMAs when priorities are established. When suppression resources are widely available,

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	maximum efforts would be placed on limiting fire growth in GHMA polygons as well. These priority areas will be further refined following completion of the Greater Sage-Grouse Landscape Wildfire and Invasive Species Habitat Assessments described in Appendix J. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP: Appropriate management response will be used on all wildfires in the planning area. Full protection strategies and tactics will be used in the following areas: 1. WUI 2. Wildland industrial interface 3. Developed recreation sites 4. Developed electronics sites of all types. In all other areas AMR strategies and tactics will be determined by (but not limited to) the following: 1. Firefighter and public safety 2. Resource values at risk 3. Proximity to private land 4. Firefighting resource availability. Tactical constraints follow: 1. The use of retardant within 300 feet of surface water (standing or running) is prohibited. 2. No trees are to be cut during suppression activities within 200 yards of an identified bald eagle roost. No heavy equipment will be used within the following areas, except when human safety is at risk: 1. Areas of cultural resource sensitivity 2. Riparian/wetland habitats 3. Big game crucial winter range habitats 4. Greater Sage-Grouse leks 5. Areas of highly erosive soils. In areas not identified as full protection, heavy equipment usage will be limited to existing roads and trails or immediately adjacent to them. Kemmerer RMP: In areas of high-density urban and (or) industrial interface with intermingled BLM-administered lands, suppression objectives will follow the AMR in an approved fire management plan for the planning area to provide first for human health and safety, while minimizing loss of property and threats to other surface owners. Generally, wildland fires are suppressed in these areas. In areas of low-density urban and (or) industrial interface where BLM-administered lands occur in large contiguous blocks, fire suppression objectives will follow the AMR in an approved fire management plan for the planning area to provide first for human health and safety, while allowing for achievement of resource objectives. Newcastle RMP: Full suppression will be used on fires endangering human life or that spread to within 0.25 mile of state or private lands, structures and facilities, oil and gas fields, important riparian habitat, or other sensitive resources. All wildfires will be evaluated to determine the need for rehabilitation or restoration measures. Restoration of burned areas will be by natural succession unless a special need is identified to prevent further resource damage.

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	Pinedale RMP: Wildland fire mitigation and fuels activities will be managed to provide for firefighter and public safety as a first priority. Public lands within intermixed landownership areas will be managed in association with the adjoining and nearby private and state lands. Areas of mixed landownership, communities at risk as identified in the Federal Register, Volume 66, Number 160, 2001 (Antelope Run, Beaver Creek area, Boulder, Cottonwood Creek, Daniel, Forty Rod, Hoback Ranches, New Fork, Pinedale, Pocket Creek, and Upper Green); urban and industrial interface areas; and areas containing high-priority resource values have high priority for response to wildland fires and/or for fuels reduction and mitigation. Wildland fire suppression activities will be based on the AMR. Rawlins RMP: A high priority for fire management activities will be given to areas identified as communities at risk, industrial interface areas, and areas containing resource values considered high priority within the RMP planning area. Green River RMP: Wildfire suppression will emphasize AMR. Immediate control actions will be used only in cases of arson, direct threat to public safety, or a strong potential threaten structural property. Fire suppression actions will be based on achieving the most efficient control and allowing historical acres burned to increase. Activity plans will be developed for designated fire management areas defining specific parameters for all fire occurrences. JMH CAP: Appropriate management response to protect the basin big sagebrush/lemon scurfpea plant communities will be applied. Wildland and prescribed fires will be managed in all vegetation types to maintain or improve biological diversity and the overall health of the public lands. In particular, plant species and age class diversity will be a priority; thus, AMR for all wildland fires will be identified and implemented depending on the resources and management objectives for the area. Suppression techniques and hazardous fuels reduction activities will be identified to reduce wildland fire severity and occurrence on portions of the landscape where fire could cause undesirable changes in plant community composition and structure. A site-specific analysis will be prepared for sensitive resource areas, such as special status plant species sites, heritage sites, historic trails, and ACECs, to determine the type of fire suppression activity that will be acceptable. Fire equipment and fire suppression techniques, such as vegetation clearing, will be limited to existing roads and trails in special status plant species habitat. As appropriate, the Fire Management Plan will be updated to reflect the appropriate suppression activity in sensitive resource areas.
Wildlife and Fisheries Habitat Management	
Monitoring Effectiveness	
125	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** The BLM, in coordination with the State of Wyoming and its agencies, other local partners and stakeholders, would establish monitoring framework (Appendix D) for sage-grouse populations and habitat that would be incorporated into individual project approvals, including small and in-house projects, as appropriate and necessary. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Casper RMP:

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	Bates Hole and Fish Creek/Willow Creek: The areas will have priority for vegetative treatments to improve sage-grouse habitats and for vegetation monitoring to ensure residual herbaceous vegetation is maintained for nesting cover on public lands.
Density and Disturbance	
126	In PHMAs (core only), the density of disturbance of an energy or mining facility (Appendix D) would be limited to an average of one site per square mile (640 acres) within the DDCT, subject to valid existing rights. The one location and cumulative value of existing disturbances will not exceed 5 percent of suitable habitat of the DDCT area. Utilize the Greater Sage-Grouse density disturbance calculation tool as described in Appendix D.
127	Inside PHMAs (connectivity only), all suitable habitat disturbed (any program area) will not exceed 5% of suitable habitat within the DDCT area using the DDCT process described in Appendix D.
Onsite and Offsite Mitigation	
,128	**Within PHMAs, specific to management for Greater Sage-Grouse, all RMPs are amended as follows:** In undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation in PHMA, the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. When compensatory mitigation is required, the BLM, in coordination with the State of Wyoming and its agencies and partners, will ensure an essential nexus and rough proportionality exists between the residual impacts that warrant compensatory mitigation and the compensatory mitigation actions, as determined by the best available science. This essential nexus and rough proportionality will be clearly described in the NEPA analysis, decision document, and land use authorization for a land-use authorization application. In-kind mitigation is generally preferred to out-of-kind mitigation, although there may be exceptions, including where out-of-kind mitigation would be more effective for achieving BLM's resource, value, and function goals and objectives, as long as an essential nexus is maintained with the land use's impacts. Where in-kind mitigation provides no net benefit to sage-grouse, or where other habitat types are most limiting to populations, mitigation should focus on habitats that provide the greatest benefit to the species. **Outside of PHMA and/or for values other than Greater Sage-Grouse, the following RMP decisions remain in effect with the modification described above:** Pinedale RMP: Offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as possible mitigation for proposed activities within the planning area. Proposed offsite mitigation will be described and analyzed for effectiveness in detail on a project-specific basis. Planning for offsite mitigation will be performed in coordination with local government agencies. The need for offsite mitigation will be determined in conformance with current BLM policy, as updated. The order of use of mitigation methods from most to least preferred is as follows: 1. Onsite mitigation directly resolving impacts created by the action. 2. Offsite mitigation to the resources affected by the action that cannot be resolved onsite. 3. Offsite mitigation to similar or related resources affected by the action that cannot be resolved onsite. The following stipulations apply to offsite mitigation measures:

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	1. Offsite mitigation will be used as a last choice when developing mitigation measures. 2. Offsite mitigation proposals will describe the replacement or substitution activities or methods that are used to address potential impacts on specific resources or environments or both. 3. Offsite mitigation must be as close to "in-kind" in replacement or substitution of resources, habitat function, or environments as practicable (e.g., elk habitat for elk habitat, historical properties for historical properties). 4. Offsite mitigation practices must last as long as the impacts are expected to occur. 5. Offsite mitigation practices are to be developed, conducted or performed, and funded by the project proponent. 6. Offsite mitigation activities must be conducted subject to BLM review and approval that the mitigation will actually address the impacts occurring on the public lands. The priority order for mitigating resource impacts onsite or offsite is as follows: 1. Onsite Mitigation – Onsite (avoid, minimize, rectify, or reduce in time). 2. Offsite Mitigation – Local (unless greater resource benefits can be achieved through regional or interstate mitigation). 3. Offsite Mitigation – Regional (unless greater resource benefits can be achieved through interstate mitigation). 4. Offsite Mitigation – Interstate: The preferred area for conducting offsite mitigation is as near (local offsite mitigation) to the project or impacted area as possible or as scientific information and impact analysis suggests. Offsite Mitigation – Interstate: The preferred area for conducting offsite mitigation is as near (local offsite mitigation) to the project or impacted area as possible or as scientific information and impact analysis suggests.
Timing and Distance Restrictions	
129	**Sage-grouse leks inside PHMAs:** Surface occupancy and surface disturbing activities would be prohibited on or within a 0.6 mile radius of the perimeter of occupied sage-grouse leks (Map 2-3). The Authorized Officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse.
130	**Sage-grouse leks outside PHMAs:** Surface occupancy and surface disturbing activities would be prohibited on or within a 0.25 mile radius of the perimeter of occupied sage-grouse leks (Map 2-3). The Authorized Officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse.
131	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside PHMAs (core only):** Surface disturbing and/or disruptive activities would be prohibited from March 15–June 30 to protect sage-grouse breeding, nesting, and early brood rearing habitat. This timing limitation would be applied throughout the PHMAs (core only). Activities in unsuitable habitats would be evaluated under the exception, waiver, and modification criteria and could be allowed on a case by case basis.

Action #	BLM Proposed Land Use Plan Amendments
	Where credible data support different timeframes for this seasonal restriction, dates could be shifted by up to 14 days prior to or subsequent to the above dates.
132	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside PHMAs (connectivity only):** Surface disturbing and/or disruptive activities would be prohibited within PHMAs (connectivity only) from March 15–June 30 to protect breeding, nesting, and early brood-rearing habitats within 4 miles of the lek or lek perimeter of any occupied sage-grouse lek within identified PHMAs (connectivity only). This timing limitation would be applied throughout the PHMAs (connectivity only). Activities in unsuitable habitats would be evaluated under the exception, waiver, and modification criteria and may be allowed on a case-by-case basis. Where credible data support different timeframes for this seasonal restriction, dates could be shifted by 14 days prior or subsequent to the above dates.
133	**Sage-grouse breeding, nesting, and early brood-rearing habitat outside PHMAs:** Surface disturbing and/or disruptive activities would be prohibited from March 15–June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the lek or lek perimeter of any occupied lek located outside PHMAs. Where credible data support different timeframes for this restriction, dates could be shifted by 14 days prior or subsequent to the above dates.
134	**Sage-grouse winter concentration areas:** Surface disturbing and/or disruptive activities in mapped sage-grouse winter concentration areas, to be mapped by the WGFD, would be prohibited from December 1–March 14 to protect PHMA (core only) populations of sage-grouse that use these winter concentration habitats. This timing limitation would be applied to all winter concentration areas within PHMAs. Activities in unsuitable habitats within PHMAs would be evaluated under the exception, waiver, and modification criteria and could be allowed on a case-by-case basis. Protection of additional mapped winter concentration areas in GHMAs would be implemented where winter concentration areas are identified as supporting populations of sage-grouse that attend leks within PHMAs (core only). Appropriate seasonal timing restrictions and habitat protection measures would be considered and evaluated in all identified winter concentration areas.
Predation	
135	The BLM would support other agencies in their efforts to minimize impacts from predators. The BLM would implement strategies and techniques in land management decisions that address predators shown to pose a threat to sage-grouse (Appendix F). The BLM would support and encourage other agencies in their efforts to minimize impacts from predators on sage-grouse where needs have been documented.
Noise	
136	The BLM would work with proponents to limit project related noise where it would be expected to reduce functionality of habitats that support PHMA populations. The BLM would evaluate the potential for limitation of new noise sources on a case-by-case basis as appropriate.

Action #	BLM Proposed Land Use Plan Amendments
	BLM's near-term goal would be to limit noise sources that would be expected to negatively impact PHMA populations and to continue to support the establishment of ambient baseline noise levels for occupied PHMA leks. As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate limitations would be implemented where necessary to minimize potential for noise impacts on PHMA population behavioral cycles. As new research is completed, new specific limitations would be coordinated with the WGFD and partners. Noise levels at the perimeter of the lek should not exceed 10 A-weighted Decibels (dBA) above ambient noise.
Adaptive Management	
137	The Greater Sage-Grouse adaptive management plan (Appendix D) provides a means of addressing and responding to unintended negative impacts to Greater Sage-Grouse and its habitat will be addressed before consequences become severe or irreversible. The Wyoming Greater Sage-Grouse LUP Amendments will include the requirement for projects requiring an EIS to develop adaptive management strategies in support of the population management objectives for Greater Sage-Grouse set by the State of Wyoming. Wyoming ADPPs will include an adaptive management plan, as reviewed by the BLM WO, SOL, and USFWS, which includes: Upon determination that a hard trigger is tripped, the BLM and/or the Forest Service will immediately defer issuance of discretionary authorizations for new actions for a period of 90 days. In addition, within 14 days of a determination, the Adaptive Management Working Group will convene to develop an interim response strategy and initiate an assessment to determine the causal factors. Adaptive management triggers are essential for identifying when potential management changes are needed in order to continue meeting Greater Sage-Grouse conservation objectives. With respect to sage-grouse, all regulatory entities in Wyoming, including the BLM and Forest Service, use soft and hard triggers. Soft and hard triggers are focused on three metrics: 1) number of active leks, 2) acres of available habitat, and 3) population trends based on annual lek counts. In making amendments to this plan, the BLM will coordinate with the USFWS as BLM continues to meet its objective of conserving, enhancing and restoring Greater Sage-Grouse habitat by reducing, minimizing or eliminating threats to that habitat. <u>Soft Triggers:</u> Soft triggers are indicators that management or specific activities may not be achieving the intended results of conservation action or that unanticipated changes to populations or habitats have occurred that have the potential to place habitats or populations at risk. The soft trigger is any deviation from normal trends in habitat or population in any given year. Metrics include, but are not limited to, annual lek counts, wing counts, aerial surveys, habitat monitoring, and DDCT evaluations. BLM and/or Forest Service field offices, with the assistance of their respective land and resource management plan implementation groups, local WGFD offices, and local sage-grouse working groups will evaluate the metrics with the Adaptive Management Working Group (AMWG) on an annual basis. The purpose of these strategies is to address localized Greater Sage-Grouse population and habitat changes by providing the framework in which management will change if monitoring identifies negative population and habitat anomalies in order to avoid crossing a hard trigger threshold. <u>Hard Triggers:</u> Hard triggers are indicators that management is not achieving desired conservation results. Hard triggers would be considered a catastrophic indicator that the species is not responding to conservation actions, or that a larger-scale impact or set of impacts is having a negative effect. Within the range of normal population variables, hard triggers shall be determined to take effect when two of the three metrics exceeds 60 percent of normal variability for the area under management in a single year, or when any of the three metrics exceeds 40% of normal variability for a

Action #	BLM Proposed Land Use Plan Amendments
	three year time period within a five-year range of analysis. A minimum of three consecutive years in a five-year period is used to determine trends (i.e., Y1-2-3, Y2-3-4, Y3-4-5).
Sagebrush Focal Areas	
138	Designate SFAs as shown on Map 2-36 (1,915,990 acres). SFAs will be managed as PHMA, with the following additional management: 1) Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights, the lands shown in Map 2-23 (252,160 acres).2) Prioritized for management and conservation actions in these areas, including, but not limited to review of livestock grazing permits/leases (see livestock grazing section for additional actions).

[1]Wind energy development is a specialized aspect of ROW authorizations. Exclusion and avoidance areas described here for wind energy development are in addition to the ROW actions described in actions 30 through 35.

2.6.4 Forest Service Proposed LUP Amendments

Although the BLM and Forest Service propose plan amendments are very similar, some differences occur. Differences are due to (1) variations in BLM and Forest Service planning regulations (see Section 1.7 in Chapter 1); (2) variation in agency authority (especially in minerals management); and (3) variation in management emphasis. Differences also occur as the result of variation in required terminology; the BLM provides direction in "Management Actions" while the Forest Service proposes direction in "Desired Conditions," "Standards," and "Guidelines." Both agencies propose direction in "Objectives."

Some management actions for the BLM Proposed LUP Amendments propose management that is either similar to existing National Forest and National Grassland management direction or that is not appropriate to include in a Forest Service plan amendment. Examples include direction regarding project level analysis, "to do" lists for future inventory or assessment work, direction to develop tactical management plans, and repetition of existing direction from directives, laws, or regulations. Further information about this management direction will be displayed in implementation guidance that will follow issuance of the final approved Forest Service plan amendments.

The management described in the Forest Service plan amendments for priority-core and priority-connectivity management areas include the "proposed priority-core" and "proposed priority-connectivity" management areas. Maps 2-8, 2-13, 2-18, 2-23, 2-28, and 2-33 display the location of these areas for the Forest Service Proposed LUP Amendments.

Forest Service Plan Components[2]

Desired condition - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.

Guideline - A constraint on project and activity decision making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.

Standard - A mandatory constraint on project and activity decision making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

The direction in the following standards and guidelines will be applied consistent with applicable valid existing rights, laws, and regulations.

Greater Sage-Grouse Habitat

GRSG-GRSGH-DC-001-Desired Condition - The landscape for Greater Sage-Grouse encompasses large contiguous areas of native vegetation, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community

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[2] *Plan component definitions are based on generally accepted meanings under the 1982 rule and the Forest Service Plan Wording Style Guide 2009, http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5260265.pdf.*

compositions exist without invasive species, which have variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for Greater Sage-Grouse.

GRSG-GRSGH-DC-002-Desired Condition - In Greater Sage-Grouse habitat management areas, including all seasonal habitats, 70% of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 10% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for Greater Sage-Grouse during this seasonal period. Specific desired conditions for Greater Sage-Grouse based on seasonal habitat requirements are in Table 2-5.

Table 2-5. Seasonal Habitat Desired Conditions for Greater Sage- grouse

Attribute	Indicators	Desired Condition
Areas Managed for Breeding and Nesting[1,2,3] (Seasonal Use Period March 15-June 30) Apply 5.3 miles from occupied leks.[4]		
Lek Security	Proximity of trees[5]	Trees or other tall structures are none to uncommon within 1.86 miles of leks[6,7]
	Proximity of sagebrush to leks[6]	Adjacent protective sagebrush cover within 328 feet of lek[6]
Cover	Seasonal habitat extent[7] (Percent of seasonal habitat meeting desired conditions.)	>80% of the breeding and nesting habitat
	Sagebrush canopy cover[6,7,8]	15 to 25%
	Sagebrush height[7] Arid sites[7,9] Mesic sites[7,10]	 4 to 32 inches in black sage and 12 to 32 inches in all other areas All Wyoming NFs and NGs: 16 to 32 inches
	Predominant sagebrush shape[6]	>50% in spreading[11]
	Perennial grass canopy cover [6,7] Arid sites[6,7,9] Mesic sites[6,7,10]	 ≥10% ≥15%
	Perennial grass height[6,7,8]	Provide overhead and lateral concealment from predators[6,15]
	Perennial forb canopy cover [6,7,8] Arid sites[9] Mesic sites[10]	 ≥5%[6,7] ≥10%[6,7]
Areas Managed For Brood-Rearing/Summer[1] (Seasonal Use Period July 1-November 30)		
Cover	Seasonal habitat extent[7] (Percent of seasonal habitat meeting desired conditions.)	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%

Attribute	Indicators	Desired Condition
	Sagebrush height[7,8]	4 to 32 inches in black sage and 12 to 32 inches in all other areas
	Perennial grass canopy cover and forbs[7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition[12]
	Upland and riparian perennial forb availability[6,7]	Preferred forbs are common with several preferred species present[13]
Winter[1] (Seasonal Use Period December 1-March 14)		
	Seasonal habitat extent[6,7,8] (Percent of seasonal habitat meeting desired conditions.)	>80% of the winter habitat
	Sagebrush canopy cover above snow[6,7,8]	>10%
Cover and Food	Sagebrush height above snow[6,7,8]	>10 inches[14]

[1]Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit.
[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts.* University of Montana. Missoula, MT.
[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-Grouse nests in relatively contiguous sagebrush habitats.* Condor 107:742-752.
[4] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 5.3 miles is not appropriate.
[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.
[6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl. *In Press. Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies*, Technical Reference 6710-1. U.S. Bureau of Land Management, Denver, Colorado. Submitted for publication.
[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.
[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations.* Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.
[9] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (HAF 2014).
[10] ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (HAF 2014).
[11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (HAF 2014).
[13] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting Greater Sage-Grouse habitat requirements.
[13] Preferred forbs are listed in Habitat Assessment Framework (HAF) Table III-2 (HAF 2014). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.
[14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.
[15]Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis.

GRSG-GRSGH-ST-003-Standard - Design habitat restoration projects to move towards the desired conditions in table 1 and incorporate the concepts outlined in Appendix C - *Reclamation Plan and* Appendix D - *Monitoring Framework.*

GRSG-GRSGH-ST-004-Standard - When (1) annual lek counts, wing counts, aerial surveys, habitat monitoring or Density Disturbance Calculation Tool evaluations show deviation from normal annual fluctuations in Greater Sage-Grouse habitat or populations for two consecutive years that may indicate a long-term downward trend or (2) monitoring identifies other negative population or habitat anomalies for Greater Sage-Grouse, conduct an evaluation to determine causal factors and develop an appropriate response strategy. This strategy may include curtailment of activities that may adversely affect Greater Sage-Grouse populations or habitat.

GRSG-GRSGH-ST-005-Standard - Variability in (1) number of active leks, (2) acres of available Greater Sage-Grouse habitat, or (3) Greater Sage-Grouse population trends based on lek counts can provide catastrophic indicators that Greater Sage-Grouse are not responding to conservation measures set forth in the plan or that large scale negative impacts to Greater Sage-Grouse populations or habitat are occurring. If two of the preceding three indicators exceed 60% of normal variability in a year or one of the preceding three indicators exceeds 40% of normal variability for 3 out of any 5 years, desired conservation results are not being attained and within 14 days the Adaptive Management Working Group (i.e., representatives from the Bureau of Land, Forest Service, US Fish and Wildlife Service, and State of Wyoming) will convene to develop an interim response strategy and initiate an assessment to determine the causal factors.

GRSG-GRSGH-GL-006-Guideline - Sagebrush removal in priority habitat management areas and sagebrush focal areas and in wintering habitat should be avoided unless necessary to support attainment of desired habitat conditions (Table 2-5).

GRSG-GRSGH-GL-007-Guideline - Within priority habitat management areas and sagebrush focal areas in northeast Wyoming, vegetation treatments in nesting and wintering habitat that would reduce sagebrush canopy to less than 15% should be restricted.

GRSG-GRSGH-GL-008- Guideline - When removing conifers that are encroaching into Greater Sage-Grouse habitat, avoid persistent woodlands (i.e., old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-009-Guideline - In priority and general habitat management areas and sagebrush focal areas, actions and authorizations should be designed to limit the spread and effect of undesirable non-native plant species.

GRSG-GRSGH-GL-010-Guideline - To facilitate safe and effective fire management actions, in priority and general habitat management areas and sagebrush focal areas, fuel treatments in high-risk areas (i.e., areas likely to experience wildfire at an intensity level that might result in movement away from the Greater Sage-Grouse desired conditions in table (1) should be designed to reduce the spread and/or intensity of wildfire or the susceptibility of Greater Sage-Grouse values to move away from desired conditions (Table 2-5).

GRSG-GRSGH-GL-011-Guideline - In priority and general habitat management areas and sagebrush focal areas, native plant species should be used, when possible, to restore, enhance, or maintain desired conditions (Table 2-5).

GRSG-GRSGH-GL-012-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired conditions (Table 2-5).

Timing, Distance, Density, and Disturbance

GRSG-TDDD-ST-013-Standard - In priority habitat management areas and sagebrush focal areas, do not authorize new surface occupancy or surface disturbing activities on or within a 0.6 mile radius of the perimeter of occupied leks that are located in priority and sagebrush habitat management areas.

GRSG-TDDD-ST-014-Standard - In general habitat management areas, do not authorize new surface occupancy or surface disturbing activities on or within a 0.25 mile radius of the perimeter of occupied leks.

GRSG-TDDD-ST-015-Standard - During lekking (March 1 to May 15), restrict noise to 10dB above ambient (not to exceed 20-24 dB) measured at the perimeter of an occupied lek to lekking birds from 6 pm to 9 am within a buffer distance[2] of 3.1 miles.

GRSG-TDDD-ST-016-Standard - In-kind mitigation is preferred to out-of-kind mitigation. Where in-kind mitigation provides a net conservation gain to Greater Sage-Grouse, or where other habitat types are most limiting to populations, focus mitigation on habitats that provide the greatest benefit to the species. When approving mitigation requests, use the following hierarchy:

1. Onsite (on lease)
2. Offsite within the project's DDCT analysis area
3. Offsite within the same priority or sagebrush focal area boundary
4. Adjacent to the affected priority management areas or sagebrush focal area within the general habitat management area boundary
5. Offsite within the same 2006 WAFWA Strategy determined Management Zone as the impact
6. Other areas as identified by the local unit.

GRSG-TDDD-GL-017-Guideline[3] - In priority-core habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for the seasonal restriction, dates may be shifted by 14 days before or subsequent to the above dates.

GRSG-TDDD-GL-018-Guideline[3] - Within priority-connectivity habitat management areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30 within 4 miles of a lek or lek perimeter of an occupied lek within priority-connectivity areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this seasonal restriction, dates may be shifted by 14 days before or after the above dates.

GRSG-TDDD-GL-019-Guideline[3] - In general habitat management areas, do not authorize new surface disturbing or disruptive activities from March 15 to June 30 within 2 miles of the lek or lek perimeter of any occupied lek located inside general areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this restriction, dates may be shifted by 14 days before or subsequent to the above dates.

GRSG-TDDD-GL-020-Guideline[3] - Within mapped winter concentration areas in priority-core habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from December 1 through March 14 to protect priority-core and sagebrush focal area Greater Sage-Grouse populations that use these winter concentration habitats. Activities not located in suitable habitat that meet the exception, waiver, and modification criteria may be authorized.

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[2] *Plan buffer distances reflect lower-interpreted range from Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H., 2014, Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., http://dx.doi.org/10.3133/ofr20141239.*

[3] *On a case-by-case basis, and only when it can be demonstrated that the activity will not cause declines in greater sage-grouse populations, allow exceptions, modifications and waivers. The authorized officer may grant an exception if a review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, live-history, or behavioral needs of greater sage-grouse.*

GRSG-TDDD-GL-021-Guideline[3] - Within mapped winter concentration areas in priority-connectivity and general habitat management areas, do not authorize new surface disturbing or disruptive activities from December 1 through March 14 where winter concentration areas are identified as supporting populations of Greater Sage-Grouse that attend leks within priority-core habitat management areas and sagebrush focal areas.

GRSG-TDDD-GL-022-Guideline[3] - In priority-core habitat management areas and sagebrush focal areas, limit the density of activities related to oil and gas development or mining activities to no more than an average of one pad or mining location per 640 acres, using the current Density Disturbance Calculation Tool process described in Appendix D.

GRSG-TDDD-GL-023-Guideline[3] - In priority habitat management areas and sagebrush focal areas, do not authorize surface disturbance and disruptive activities unless all existing discrete anthropogenic disturbances cover less than 5% of the suitable habitat in the surrounding area using the current Density Disturbance Calculation Tool process or its replacement, as described in Appendix D, and the new use will not cause exceedance of the 5% cap. An exception is described in GRSG-M-LM-ST-097-Standard.

Infrastructure

GRSG-INFRA-GL-024-Guideline - In priority habitat management areas and sagebrush focal areas, when constructing new infrastructure and during maintenance, replacement, and upgrades to existing infrastructure, impacts to Greater Sage-Grouse and their habitats should be mitigated.

- Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to Greater Sage-Grouse in flight. Authorization of new infrastructure with guy wires should be restricted.
- Power lines (distribution and transmission) should be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.
- When possible, perch deterrents should be installed on existing and new overhead facilities. Tanks and other above ground facilities should be equipped with structures or devices that discourage nesting and perching of raptors and corvids.
- Permanent structures should be designed or sited to minimize impacts to Greater Sage-Grouse, with emphasis on locating and operating facilities that create movement (e.g., pump jacks) or attract frequent human use and vehicular traffic (e.g., fluid storage tanks) in a manner that will minimize disturbance of Greater Sage-Grouse or interference with habitat use.
- Liquid gathering facilities should be placed outside priority habitat management areas and sagebrush focal areas. To reduce truck traffic and perching and nesting of ravens and raptors, tanks should not be placed at well locations.

Lands and Realty

Special Use Authorizations (non-recreation)

GRSG-LR-SUA-ST-025-Standard - In priority habitat management areas and sagebrush focal areas, restrict issuance of new special use authorizations for infrastructure, such as high-voltage transmission lines, major pipelines hydropower, distribution lines, and cellular towers (Map 2-13). Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to Greater Sage-Grouse will be avoided with the exception. Existing authorized uses will continue to be recognized.

GRSG-LR-SUA-ST-026-Standard - In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary lands special use permits (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on Greater Sage-Grouse or their habitats.

GRSG-LR-SUA-ST-027-Standard - In priority and general habitat management areas and sagebrush focal areas, when a lands special use authorization is revoked or terminated and no future use is contemplated, require the authorization holder to remove overhead lines and other infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-028-Standard - In priority habitat management areas and sagebrush focal areas, new power transmission projects must be located within the 2-mile wide transmission line route in south-central and southwestern Wyoming (see Map 2-15) or as close as technically feasible (i.e., within 0.5 mile) on either side of existing 115 kV or larger transmission lines or corridors creating a route no wider than 1 mile. These projects will not be counted against the 5% disturbance cap (Wyoming Density and Disturbance Calculation Tool Manual).

GRSG-LR-SUA-ST-029-Standard - In priority habitat management areas and sagebrush focal areas, new power distribution lines must not be located within 0.6 miles from the perimeter of occupied Greater Sage-Grouse leks. Effective mitigation to protect Greater Sage-Grouse is required. See Standards and Guidelines in the Timing, Distance, Density, and Disturbance section and see GRSG-INFRA-GL-024-Guideline.

GRSG-LR-SUA-ST-030-Standard - In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors or rights-of-way unless an alternate route would benefit Greater Sage-Grouse or their habitats.

GRSG-LR-SUA-GL-031-Guideline - Authorization of new temporary MET towers should be restricted in priority habitat management areas and sagebrush focal areas within 2 miles of occupied Greater Sage-Grouse leks, unless they are out of direct line of sight of an occupied lek.

GRSG-LR-SUA-GL-032-Guideline - In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors and rights-of-way, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to Greater Sage-Grouse are being avoided. If new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-033-Standard - In priority and general management areas and sagebrush focal areas, do not approve landownership adjustments unless the action results in a net conservation gain to Greater Sage-Grouse or it will not directly or indirectly adversely impact Greater Sage-Grouse conservation.

GRSG-LR-LOA-GL-034-Guideline - In priority and general habitat management areas and sagebrush focal areas with minority Federal ownership, consider landownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved Greater Sage-Grouse population trends and habitats.

Land Withdrawal

GRSG-LR-LW-GL-035-Guideline - In priority habitat management areas and sagebrush focal areas, use land withdrawals as a tool, where appropriate, to prevent activities that will be detrimental to Greater Sage-Grouse or their habitats.

Wind Energy Development

GRSG-WS-GL-036-Guideline - In priority habitat management areas and sagebrush focal areas, restrict authorization of wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

Livestock Grazing

GRSG-LG-DC-037-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, livestock grazing is managed to ensure adequate nesting cover and does not conflict with the attainment of other vegetation attributes (Table 2-5).

GRSG-LG-GL-038-Guideline - Grazing guidelines in Table 2-6 should be applied in each of the seasonal habitats in Table 2-6. If values in Table 2-6 cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2-5 consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2-6 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of Greater Sage-Grouse habitat.

Table 2-6. Grazing Guidelines for Greater Sage-Grouse Seasonal Habitat

Seasonal Habitat	Grazing Guidelines
Areas managed for breeding and nesting[1] within 5.3 miles of occupied leks	Perennial grass height[2]: When grazing occurs during breeding and nesting season (March 15 to June 30) manage for upland perennial grass height of 7 inches [3,4,5,6] When grazing occurs post breeding and nesting season (July 1 to November 30) manage for 4 inches[4,5,8] of perennial grass height.
Areas managed for brood rearing and summer habitat[1]	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation[7,9]
Winter[1]	<35% utilization of sagebrush

[1] For descriptions of Seasonal Habitat and Seasonal Periods of Greater Sage-Grouse see Table 2-5.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming.*
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly, 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of Greater Sage-Grouse Centrocercus urophasianus nesting and brood-rearing habitats*. Wildlife Biology 13(1): 42-50.
[6] Due to variability of annual precipitation and forage production 7"stubble height may not be possible every year, even in the absence of livestock grazing.
[7] Crawford et al. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986). "Moderate use equates to a 10-cm residual stubble height for most grasses and sedges."
[8] Stubble height to be measured at the end of the growing season.
[9] Stubble height to be measured in the meadow areas used by Greater Sage-Grouse for brood-rearing (not on the hydric greenline).

GRSG-LG-GL-039-Guideline - On the Thunder Basin National Grassland, if 90% or more of the allotment falls within nesting or brood rearing habitat, 25% of the allotment would be exempted from the breeding/nesting residual perennial grass height guidelines in Table 2-6.

GRSG-LG-GL-040-Guideline - In priority and general habitat management areas and sagebrush focal areas, when livestock grazing permits and/or grazing preference are voluntarily relinquished, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage

reserve where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (Table 2-5).

GRSG-LG-GL-041-Guideline - Bedding sheep and locating camps within 0.6 mi from the perimeter of a lek during lekking (March 1 to May 15) should be restricted.

GRSG-LG-GL-042-Guideline - Trailing livestock should be routed through non-habitat or in areas that will minimize impacts to Greater Sage-Grouse and their habitats. Specific routes and timeframes should be identified, existing trails should be used, and stopovers on occupied leks should be avoided.

GRSG-LG-043-Guideline - Collision risk associated with existing fences within 1.2 miles of leks should be minimized through removal or modification (e.g. marking, laydown fences, or other design features).

GRSG-LG-GL-044-Guideline - In priority habitat management areas and sagebrush focal areas, new permanent livestock facilities, except fences, should not be constructed within 0.6 miles from the perimeter of occupied leks. In general habitat management areas, new permanent livestock facilities should not be constructed within 0.25 miles of occupied leks.

GRSG-LG-GL-045-Guideline - On the Thunder Basin National Grassland, where general habitat management areas overlap with Management Area 8.4 (Mineral Production), Management Area 3.63 (Black-footed Ferret Reintroduction Habitat), or other designated areas for short-grass species, livestock grazing should be managed to meet the objectives for that Management Area.

Fire Management

GRSG-FM-DC-046-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, the extent and spread of wildfire resulting in loss of sagebrush is minimized, considering firefighter and public safety and other high priority values.

GRSG-FM-ST-047-Standard - In priority and general habitat management areas and sagebrush focal areas, when prescribed fire is used for fuels management or vegetation treatments, design the burn to move towards desired habitat conditions (Table 2-5). Restrict prescribed fire in areas of Wyoming big sagebrush, other xeric sagebrush species, where cheatgrass or other fire-invasive species occur, and/or within areas of less than 12-inch precipitation zones unless necessary to facilitate site preparation for restoration of Greater Sage-Grouse habitat consistent with desired conditions in Table 2-5.

GRSG-FM-ST-048-Standard - In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of Greater Sage-Grouse habitat consistent with desired conditions in Table 2-5, the associated NEPA analysis must identify how the project would move towards Greater Sage-Grouse desired conditions, why alternative techniques were not selected, and how potential threats to Greater Sage-Grouse habitat would be minimized.

GRSG-FM-ST-049-Standard - On the Thunder Basin National Grassland, where general habitat management areas overlap with Management Area 3.63 (Black-footed Ferret Reintroduction Habitat), or other designated areas for short-grass species, allow prescribed fire to meet objectives for that Management Area.

GRSG-FM-GL-050-Guideline - In priority and general habitat management areas and sagebrush focal areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species, if analysis demonstrates that non-native plants will not damage Greater Sage-Grouse habitat in the long-term.

GRSG-FM-GL-051-Guideline - Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority and general habitat management areas and sagebrush focal areas should be avoided.

GRSG-FM-GL-052-Guideline - In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted, whenever safe and practical to do so, as determined by fireline leadership and incident commanders.

GRSG-FM-GL-053-Guideline - In priority and general habitat management areas and sagebrush focal areas, use fire management tactics and strategies that seek to minimize loss of existing sagebrush habitat. The safest and most practical means to do so will be determined by fireline leadership and incident commanders.

GRSG-FM-GL-054-Guideline - In priority and general habitat management areas and sagebrush focal areas, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-055-Guideline - In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-056-Guideline - In priority and general habitat management areas and sagebrush focal areas, all fire-associated vehicles and equipment should be inspected and cleaned using standardized protocols and procedures and approved vehicle/equipment decontamination systems before entering and exiting the area to minimize the introduction of invasive annual grasses and other invasive plant species and noxious weeds.

GRSG-FM-GL-057-Guideline - Unit-specific Greater Sage-Grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed and used.

GRSG-FM-GL-058-Guideline - Localized maps of priority and general habitat management areas and sagebrush focal areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-059-Guideline - In or near priority and general habitat management areas and sagebrush focal areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-060-Guideline - On critical fire weather days, protection of Greater Sage-Grouse habitat should receive high consideration, along with other high values, for positioning of resources.

GRSG-FM-GL-061-Guideline - Line officers should be involved in setting pre-season wildfire response priorities and, during period of multiple fires, prioritizing protection of priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-062-Guideline - In priority and general habitat management areas and sagebrush focal areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-063-Guideline – In priority and general habitat management areas and sagebrush focal areas, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.

Recreation

GRSG-R-DC-064-Desired Condition – In priority habitat management areas and sagebrush focal areas, recreation activities are balanced with the ability of the land to support them, while meeting Greater Sage-Grouse seasonal habitat desired conditions (Table 2-5) and creating minimal user conflicts.

GRSG-R-ST-065-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on Greater Sage-Grouse or their habitats.

GRSG-R-GL-066-Guideline – In priority and general habitat management areas and sagebrush focal areas habitat management areas, terms and conditions that protect and restore Greater Sage-Grouse habitats within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore Greater Sage-Grouse habitat.

GRSG-R-GL-067-Guideline – In priority habitat management areas and sagebrush focal areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to Greater Sage-Grouse and/or their habitats or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-068-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, within the travel management system, Greater Sage-Grouse experience minimal disturbance during breeding and nesting (March 15 to June 30), and wintering (December 1 to March 15) periods.

GRSG-RT-ST-069-Standard - Restrict construction of new category level 4 and 5 roads within 1.9 miles of the perimeter of occupied Greater Sage-Grouse leks within priority habitat management areas and sagebrush focal areas unless construction allows decommissioning of an existing route that negatively affects Greater Sage-Grouse.

GRSG-RT-ST-070-Standard – Do not allow any category of road construction within 0.6 miles from the perimeter of occupied leks in priority habitat management areas and sagebrush focal areas or 0.25 miles from the perimeter of occupied leks in general habitat management areas as described in GRSG-TDDD-ST-013 and 014-Standards.

GRSG-RT-ST-071-Standard - In priority habitat management areas and sagebrush focal areas, do not allow upgrades to existing routes that would change route category (level 1 through 5) or capacity unless the upgrading would have minimal impact on Greater Sage-Grouse, is necessary for motorist safety, or eliminates the need to construct a new road.

GRSG-RT-ST-072-Standard - If necessary to construct new roads and trails in priority or sagebrush focal areas for one of the reasons listed in GRSG-RT-ST-071-Standard or to access valid existing rights, limit construction to the minimum standard, length, and number and avoid, minimize, and mitigate impacts. See the Density Disturbance Calculation information referenced in Appendix D.

GRSG-RT-ST-073-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in this forest plan amendment.

GRSG-RT-GL-074-Guideline – In priority and general habitat management areas and sagebrush focal areas, new roads and road realignments should be designed and administered to reduce collisions with Greater Sage-Grouse.

GRSG-RT-GL-075-Guideline – In priority and general habitat management areas and sagebrush focal areas, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed perpendicular to ephemeral drainages and stream crossings, unless topography prevents doing so.

GRSG-RT-GL-076-Guideline – In priority and general habitat management areas and sagebrush focal areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (Table 2-5).

GRSG-RT-GL-077-Guideline – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road-use permits when dust has the potential to impact Greater Sage-Grouse.

GRSG-RT-GL-078-Guideline - In priority and general habitat management areas and sagebrush focal areas, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

Minerals

Fluid Minerals – Unleased

GRSG-M-FMUL-ST-079-Standard – In priority and general habitat management areas and sagebrush focal areas, new oil and gas leases may be offered consistent and subject to the leasing stipulations in the timing, distance, density, and disturbance direction in section GRSG-TDDD.

GRSG-M-FMUL-ST-080-Standard – In priority habitat management areas and sagebrush focal areas, require geophysical exploration projects to be designed to minimize Greater Sage-Grouse habitat fragmentation.

Fluid Minerals – Leased

GRSG-M-FML-ST-081-Standard – In priority habitat management areas and sagebrush focal areas when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbances and disruptive activities consistent with the rights granted in the lease.

GRSG-M-FML-ST-082-Standard – In priority habitat management areas and sagebrush focal areas, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in Table 2-5.

GRSG-M-FML-ST-083-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by Greater Sage-Grouse, and if there would be no direct, indirect, or cumulative effects on

Greater Sage-Grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise consistent with GRSG-TDDD-ST-015-Standard.

GRSG-M-FML-ST-084-Standard – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, work with the operator to minimize impacts to Greater Sage-Grouse and their habitat, such as locating facilities in non-habitat areas first and then in the least suitable habitat.

GRSG-M-FML-GL-085-Guideline – In priority and general habitat management areas and sagebrush focal areas on existing leases, operators should be encouraged to reduce disturbance to Greater Sage-Grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to Greater Sage-Grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee.

GRSG-M-FML-GL-086-Guideline – On existing federal leases in priority and general habitat management areas and sagebrush focal areas, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to Greater Sage-Grouse, based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-087-Guideline - In priority and general habitat management areas and sagebrush focal areas, where the Federal government owns the surface and the mineral estate is in non-Federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals – Operations

GRSG-M-FMO-GL-088-Guideline – In priority and important habitat management areas and sagebrush focal areas, do not authorize employee camps.

GRSG-M-FMO-GL-089-Guideline – In priority habitat management areas and sagebrush focal areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-090-Guideline – In priority and general habitat management areas and sagebrush focal areas, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-091-Guideline – In priority and general habitat management areas and sagebrush focal areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.
- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Avoid flooding terrestrial vegetation in flat terrain or low-lying areas.
- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.

- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-092-Guideline – In priority and general habitat management areas and sagebrush focal areas, to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Coal Mines

GRSG-M-CM-ST-093-Standard – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to coal exploration and new coal lease projects.

GRSG-M-CM-ST-094-Standard – Priority habitat management areas and sagebrush focal areas are essential habitat for maintaining Greater Sage-Grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).

GRSG-M-CM-GL-095-Guideline – In priority and general habitat management areas and sagebrush focal areas, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to conserve, enhance, and restore Greater Sage-Grouse and their habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-096-Standard – In priority habitat management areas and sagebrush focal areas, only approve Plans of Operation with mitigation to protect Greater Sage-Grouse and their habitats, consistent with the rights of the mining claimant as granted by the Mining Law of 1872, as amended.

GRSG-M-LM-ST-097-Standard – The disturbance cap described in GRSG-TDDD-ST-023-Standard will not be applied to foreclose development of locatable minerals on unpatented claims located under the General Mining Act of 1872, as amended; the disturbance from locatable mining will be accounted for when determining the percent disturbance and whether the cap has been exceeded.

Non-Energy Leasable Minerals

GRSG-M-NEL-GL-098-Guideline – In priority and general habitat management areas and sagebrush focal areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases for non-energy leasable minerals, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of Greater Sage-Grouse and their habitats.

GRSG-M-NEL-GL-099-Guideline - In priority and general habitat management areas and sagebrush focal areas, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to Greater Sage-Grouse and their habitat.

Mineral Materials

GRSG-M-MM-ST-100-Standard – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to authorizations for mineral material sales and free use.

GRSG-M-MM-ST-101-Standard - Permits for mineral material operations in priority, sagebrush focal, or general sage-grouse habitat management areas, must include appropriate requirements for reclamation of the site to restore, enhance, or maintain desired habitat conditions (Table 2-5).

Predators

GRSG-PR-GL-102-Guideline – Efforts by other agencies to minimize impacts from predators on Greater Sage-Grouse should be supported and encouraged where needs have been documented.

2.7 Adaptive Management, Monitoring, and Mitigation

This section describes proposed management guidance that would apply to all action alternatives (Alternatives B through D and BLM and Forest Service Proposed LUP Amendments). As conditions, law, and policy change over time or new data are collected, the LUPs would continue to be updated through maintenance actions or amendments, as appropriate, to ensure management decisions reflect those changes. An implementation plan will be developed after approval of the ROD for the LUPs. The implementation plan will address monitoring, mitigation, projects, and activities to achieve the goals and objectives of the LUPs.

2.7.1 Adaptive Management Plan

In relation to the BLM/Forest Services' National Greater Sage-Grouse Planning Strategy, adaptive management will help identify if sage-grouse conservation measures presented in this EIS contain the needed level of certainty for effectiveness. Principles of adaptive management are incorporated into the conservation measures in the plan to ameliorate threats to a species, thereby increasing the likelihood that the conservation measure and plan will be effective in reducing threats to that species. The following provides the BLM/Forest Service's adaptive management strategy for the Casper, Green River (covering the Rock Springs Field Office), Kemmerer, Newcastle, Pinedale, and Rawlins RMPs; and the BTNF, MBNF, and Thunder Basin National Grassland (TBNG) LRMPs.

Adaptive Management and Monitoring

This EIS contains a monitoring framework plan (Appendix D) that includes an effectiveness monitoring component. The agencies intend to use the data collected from the effectiveness monitoring to identify any changes in habitat conditions related to the goals and objectives of the plan and other range wide conservation strategies (U.S. Department of the Interior 2004; Stiver et al. 2006; USFWS 2013). The information collected through the Monitoring Framework Plan outlined in Appendix D will be used by the BLM and Forest Service to determine when adaptive management hard and soft triggers (discussed below) are met.

The Greater Sage-Grouse adaptive management plan provides regulatory assurance that unintended negative impacts to Greater Sage-Grouse habitat will be addressed before consequences become severe or irreversible. This adaptive management plan:

- Utilizes science based soft and hard adaptive management triggers
- Addresses multiple scales of data
- Utilizes an adaptive management working group.

Adaptive Management Triggers

Adaptive management triggers are essential for identifying when potential management changes are needed in order to continue meeting Greater Sage-Grouse conservation objectives. With respect to sage-grouse, all regulatory entities in Wyoming, including the BLM and Forest Service, use soft and hard triggers. Soft and hard triggers are focused on three metrics: (1) number of active leks; (2) acres of available habitat; and (3) population trends based on annual lek counts.

Soft Triggers

Soft triggers are indicators that management or specific activities may not be achieving the intended results of conservation actions or that unanticipated changes to populations or habitats have occurred that have the potential to place habitats or populations at risk. The soft trigger is any deviation from normal trends in habitat or population in any given year. Metrics include, but are not limited to, annual lek counts, wing counts, aerial surveys, habitat monitoring, and DDCT evaluations. BLM field offices and/or Forest Service planning units, with the assistance of their respective LRMP implementation groups, local WGFD offices, and local sage-grouse working groups, will evaluate the metrics with the Adaptive Management Working Group (AMWG) on an annual basis. The purpose of these strategies is to address localized Greater Sage-Grouse population and habitat changes by providing the framework in which management will change if monitoring identifies negative population and habitat anomalies in order to avoid crossing a hard trigger threshold.

Hard Triggers

Hard triggers are indicators that management is not achieving desired conservation results. Hard triggers would be considered a catastrophic indicator that the species is not responding to conservation actions, or that a larger-scale impact or set of impacts is having a negative effect.

Within the range of normal population variables, hard triggers shall be determined to take effect when two of the three metrics exceeds 60% of normal variability for the area under management in a single year, or when any of the three metrics exceeds 40% of normal variability for a three year time period within a five-year range of analysis. A minimum of three consecutive years in a five-year period is used to determine trends (i.e., Y1-2-3, Y2-3-4, Y3-4-5). See Management Action 137 and Appendix D.

2.7.2 Monitoring for the Greater Sage-Grouse Planning Strategy

The BLM's planning regulations, specifically 43 CFR 1610.4-9, require that LUPs establish intervals and standards for monitoring based on the sensitivity of the resource decisions. LUP monitoring is the process of tracking the implementation of LUP decisions (implementation monitoring) and collecting data/information necessary to evaluate the effectiveness of LUP decisions (effectiveness monitoring). For Greater Sage-Grouse, these types of monitoring are also described in the criteria found in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions (50 CFR Vol. 68, No. 60). One of the Policy for Evaluation of Conservation Efforts When Making Listing Decisions criteria evaluates whether provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided.

A guiding principle in the BLM National Sage-grouse Conservation Strategy (U.S. Department of the Interior 2004) is that "the Bureau is committed to sage-grouse and sagebrush conservation and will continue to adjust and adapt our National Sage-grouse Strategy as new information, science, and monitoring results evaluate effectiveness over time." In keeping with the WAFWA Sage-grouse Comprehensive Conservation Strategy (Stiver et al. 2006) and the Greater Sage-Grouse Conservation Objectives: Final Report (USFWS 2013), the BLM and Forest Service will monitor implementation and effectiveness of conservation measures in Greater Sage-Grouse habitats.

On March 5, 2010, USFWS' 12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered were posted as a Federal Register notice (75 Federal Register 13910-14014, March 23, 2010). This notice stated:

"...the information collected by BLM could not be used to make broad generalizations about the status of rangelands and management actions. There was a lack of consistency across the range in how questions were interpreted and answered for the data call, which limited our ability to use the results to understand habitat conditions for sage-grouse on BLM lands."

Standardization of monitoring methods and implementation of a defensible monitoring approach (within and across jurisdictions) will resolve this situation. The BLM, Forest Service, and other conservation partners use the resulting information to guide implementation of conservation activities.

Monitoring strategies for Greater Sage-Grouse habitat and populations must be collaborative, as habitat occurs across jurisdictional boundaries (52 percent on BLM-administered lands, 31 percent on private lands, 8 percent on National Forest System lands, 5 percent on state lands, 4 percent on tribal and other federal lands) (75 *Federal Register* 13910, March 23, 2010), and state fish and wildlife agencies have primary responsibility for population level wildlife management, including population monitoring. Therefore, population efforts will continue to be conducted in partnership with state fish and wildlife agencies. The BLM and Forest Service have finalized a monitoring framework, which can be found in Appendix D. This framework describes the process that the BLM and Forest Service will use to monitor implementation and effectiveness of LUP decisions. The monitoring framework includes methods, data standards, and intervals of monitoring at broad and mid scales; consistent indicators to measure and metric descriptions for each of the scales; analysis and reporting methods; and the incorporation of monitoring results into adaptive management. The need for fine-scale and site-specific habitat monitoring may vary by area depending on existing conditions, habitat variability, threats, and land health. Indicators at the fine and site scales will be consistent with the Habitat Assessment Framework; however, the values for the indicators could be adjusted for regional conditions.

More specifically, the framework discusses how the BLM and Forest Service will monitor and track implementation and effectiveness of planning decisions (e.g., tracking of waivers, modifications, site-level actions). The two agencies will monitor the effectiveness of LUP decisions in meeting management and conservation objectives. Effectiveness monitoring will include monitoring disturbance in habitats, as well as landscape habitat attributes. To monitor habitats, the BLM and Forest Service will measure and track attributes of occupied habitat, priority habitat, and general habitat at the broad scale, and attributes of habitat availability, patch size, connectivity, linkage/connectivity habitat, edge effect, and anthropogenic disturbances at the mid-scale. Disturbance monitoring will measure and track changes in the amount of sagebrush in the landscape and changes in the anthropogenic footprint, including change energy development density. The framework also includes methodology for analysis and reporting for field offices, states, ranger districts, BLM districts, National Forests, and forest regions, including geospatial and tabular data for disturbance mapping (e.g., geospatial footprint of new permitted disturbances) and management actions effectiveness.

2.7.3 Regional Mitigation

Consistent with the Proposed LUP Amendment's goal outlined in Section 2.6.3, the intent of the Proposed LUP Amendments is to provide a net conservation gain to the species. To do so, in undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third party actions that result in habitat loss and degradation within priority habitat (core population areas and core population connectivity corridors), the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness

of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

Mitigation Standards

In undertaking BLM and Forest Service management actions, and, consistent with valid existing rights and applicable law, in authorizing third party actions that result in habitat loss and degradation in PHMAs, the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. "Actions which result in habitat loss and degradation" include those identified as threats which contribute to Greater Sage-Grouse disturbance as identified by the USFWS in their 2010 listing decision (75 FR 13910) and shown in Table D-4 in the attached Implementation Framework (Appendix D). Mitigation will follow the regulations from the White House CEQ (40 CFR 1508.20; e.g., avoid, minimize, and compensate), hereafter referred to as the mitigation hierarchy. If impacts from BLM and Forest Service management actions and authorized third party actions that result in habitat loss and degradation remain after applying avoidance and minimization measures (i.e., residual impacts), then compensatory mitigation projects will be used to provide a net conservation gain to the species. Any compensatory mitigation will be durable, timely, and in addition to that which would have resulted without the compensatory mitigation (see the concepts of durability, timeliness, and additionality as described further in Appendix D).

Greater Sage-Grouse Conservation Team

The BLM and Forest Service will establish a WAFWA Management Zone Greater Sage-Grouse Conservation Team (hereafter, Team) to help guide the conservation of Greater Sage-Grouse, within 90 days of the issuance of the Record of Decision. This Team will develop a WAFWA Management Zone Regional Mitigation Strategy (hereafter, Regional Mitigation Strategy). The Team will also compile and report on monitoring data (including data on habitat condition, population trends, and mitigation effectiveness) from States across the WAFWA Management Zone (see Monitoring section). Subsequently, the Team will use these data to either modify the appropriate Regional Mitigation Strategy or recommend adaptive management actions (see Adaptive Management section).

The BLM and Forest Service will invite governmental and tribal partners to participate in this Team, including the State Wildlife Agency and USFWS, in compliance with the exemptions provided for committees defined in the Federal Advisory Committee Act and the regulations that implement that act. The BLM and Forest Service will strive for a collaborative and unified approach between federal agencies (e.g., USFWS, BLM, and Forest Service), tribal governments, state and local government(s), and other stakeholders for Greater Sage-Grouse conservation. The Team will provide advice, and will not make any decisions that impact federal lands. The BLM and Forest Service will remain responsible for making decisions that affect federal lands.

Developing a Regional Mitigation Strategy

The Team will develop a Regional Mitigation Strategy to inform the mitigation components of NEPA analyses for BLM and Forest Service management actions and third party actions that result in habitat loss and degradation. The Strategy will be developed within one year of the issuance of the Record of Decision. The BLM's Regional Mitigation Manual MS-1794 will serve as a framework for developing the Regional Mitigation Strategy. The Regional Mitigation Strategy will be applicable to the states/field offices/forests within the WAFWA Management Zone's boundaries.

Regional mitigation is a landscape-scale approach to mitigating impacts to resources. This involves anticipating future mitigation needs and strategically identifying mitigation sites and measures that can

provide a net conservation gain to the species. The Regional Mitigation Strategy developed by the Team will elaborate on the components identified above (i.e., avoidance, minimization, and compensation; additionality, timeliness, and durability) and further explained in Appendix D.

In the time period before the Strategy is developed, BLM will consider regional conditions, trends, and sites, to the greatest extent possible, when applying the mitigation hierarchy and will ensure that mitigation is consistent with the standards set forth in the first paragraph of this section.

Incorporating the Regional Mitigation Strategy into NEPA Analyses

The BLM and Forest Service will include the avoidance, minimization, and compensatory recommendations from the Regional Mitigation Strategy in one or more of the NEPA analysis' alternatives for BLM and Forest Service management actions and third party actions that result in habitat loss and degradation and the appropriate mitigation actions will be carried forward into the decision.

Implementing a Compensatory Mitigation Program

Consistent with the principles identified above, the BLM and Forest Service need to ensure that compensatory mitigation is strategically implemented to provide a net conservation gain to the species, as identified in the Regional Mitigation Strategy. In order to align with existing compensatory mitigation efforts, this compensatory mitigation program will be implemented at a state level (as opposed to a WAFWA Management Zone, a field office, or a forest), in collaboration with our partners (e.g., federal, tribal, and state agencies).

To ensure transparent and effective management of the compensatory mitigation funds, the BLM and Forest Service will enter into a contract or agreement with a third-party to help manage the state-level compensatory mitigation funds, within one year of the issuance of the Record of Decision. The selection of the third-party compensatory mitigation administrator will conform to all relevant laws, regulations, and policies. The BLM and Forest Service will remain responsible for making decisions that affect federal lands.

2.8 DRAFT LUP AMENDMENTS/EIS ALTERNATIVES

The following are alternatives to the Proposed LUP Amendments and were presented and analyzed in the Draft LUP Amendments/Draft EIS. Some alternatives have been refined based on public comment.

2.8.1 Alternative A (No Action)

Alternative A (No Action Alternative) is defined as a continuation of the present course of management for sage-grouse within each of the BLM and Forest Service offices. Management actions 1 through 29a do not apply to this alternative. Ongoing programs initiated under existing legislation, regulations and the existing LUPs would continue, even as new plans are developed or new planning efforts are being conducted with the planning area. Alternative A describes a subset of the current resource and land use management direction in the planning area that is proposed to be revised or supplemented by some or all of the action alternatives. This management may differ between BLM and Forest Service offices. Alternative A and its impact analysis represent the baseline to which the other alternatives and their associated analyses are compared. Alternative A uses the terms "Greater Sage-Grouse core habitat" or "core areas" as described in the Wyoming Governor's Executive Order 2011-5 (WY EO 2011-5) and defined in this document's Glossary as habitat that is most important for Greater Sage-Grouse. Management actions proposed under the Alternative A are presented in Table 2-11 and reflected in Table 2-7 (land use restrictions) and Tables 2-8 and 2-9 (oil and gas leasing stipulations).

2.8.2 Alternative B

Alternative B is based on the conservation measures developed by the NTT planning effort in IM No. WO-2012-044. As directed in the IM, the conservation measures developed by the NTT must be considered and analyzed, as appropriate, through the land use planning process and NEPA by all BLM state and field offices that contain occupied Greater Sage-Grouse habitat. Under this alternative, a surface disturbance cap of 3% per 640 acres is considered within sage-grouse priority habitat. In areas where the disturbance cap has been met by the project proponent, the BLM and Forest Service should consider opportunities for reclamation or removal of surface disturbing features that are no longer in use in order to reduce the current disturbance before further projects are permitted. This alternative considers incorporating a light grazing strategy, utilizing a 20-30% forage allocation for livestock allotments not meeting standards due to livestock grazing in sage-grouse priority habitat. Alternative B uses the term "Greater Sage-Grouse priority habitat" as described in IM No. WO-2012-044 and defined in this document's Glossary. Priority habitat is comprised of core habitat and connectivity habitat. Management actions proposed under Alternative B are presented in Table 2-11 and reflected in Table 2-7 (land use restrictions) and Tables 2-8 and 2-9 (oil and gas leasing stipulations). Alternative B is not strictly based on the conservation measures developed by the NTT planning effort. In the Western Watersheds Project v. U.S. Department of Interior, the Court remanded the Pinedale RMP decision to the BLM, without vacating the RMP, to allow the BLM to remedy the FLPMA and NEPA defects identified by the Court with respect to the Pinedale RMP and EIS. These remedies can be found in Alternative B.

2.8.3 Alternative C

Alternative C is based on the citizen groups recommended alternative. This alternative emphasizes improvement and protection of habitat for Greater Sage-Grouse and is applied to all occupied Greater Sage-Grouse habitat. Alternative C would limit commodity development in areas of occupied Greater Sage-Grouse habitat, and would close or designate portions of the planning area to some land uses. Under this alternative, a surface disturbance cap of 3% per 640 acres is considered within sage-grouse priority habitat. This alternative considers closing priority sage-grouse habitat to livestock grazing. Alternative C uses the term "Greater Sage-Grouse priority habitat" as described in IM No. WO-2012-044 and defined in this document's Glossary. Priority habitat is comprised of core habitat and connectivity habitat. Management actions proposed under Alternative C are presented in Table 2-11 and reflected in Table 2-7 (land use restrictions) and Tables 2-8 and 2-9 (oil and gas leasing stipulations).

2.8.4 Alternative D

Alternative D provides opportunities to use and develop the planning area while providing protection of Greater Sage-Grouse habitat based on scoping comments and input from Cooperating Agencies involved in the alternatives development process. This alternative increases the potential for development and resource use, with reduced Greater Sage-Grouse habitat protections. Protective measure would be applied to Greater Sage-Grouse habitat. Under this alternative, a surface disturbance cap of 9% per 640 acres is considered within sage-grouse core habitat. Alternative D uses the terms "Greater Sage-Grouse core habitat" or "core areas" as described in WY EO 2011-5 and defined in this document's Glossary. Management actions proposed under Alternative D are presented in Table 2-11 and reflected in Table 2-7 (land use restrictions) and Tables 2-8 and 2-9 (oil and gas leasing stipulations).

2.9 Summary Comparison of Proposed Land Use Plan Amendments and Draft Alternatives

This section summarizes and compares Alternatives A through D and the BLM and Forest Service Proposed LUP Amendments considered in the Final EIS. Combined with the appendices and maps, Tables 2-7

through 2-10 provide the differences among the alternatives relative to what they establish and where they occur. The tables compare the differences with the most potential to affect resources among the alternatives.

Table 2-7. Land Use Restrictions by Alternative

Resource/Activity	Land Use Restriction	Alternative A (Continuation of Existing Management) (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)	Proposed LUP Amendments (acres)
Surface Disturbing Activities	Prohibited Areas	68,550 PHMA: 44,900 GHMA: 23,470	0	0	0	337,860 PHMA: 303,470 GHMA: 30,780 FS Proposed PHMA: 3,520
	Restricted Areas	93,580 PHMA: 74,490 GHMA: 18,960	0	0	75,870 PHMA: 53,950 GHMA: 21,830	160,630 PHMA: 130,430 GHMA: 30,200 FS Proposed PHMA: 0
Fluid Mineral Leasing	Closed	871,780 PHMA: 871,780 GHMA: 0	6,886,890 PHMA: 6,886,890 GHMA: 0	16,878,220 PHMA: 6,884,390 GHMA: 9,981,180	964,860 PHMA: 964,850 GHMA: 11	883,670 PHMA: 883,670 GHMA: 0 FS Proposed PHMA: 0
	No Surface Occupancy	40,980 PHMA: 24,480 GHMA: 16,320	2,117,160 PHMA: 2,117,160 GHMA: 0	2,117,160 PHMA: 2,117,160 GHMA: 0	0	441,690 PHMA: 406,090 GHMA: 30,630 FS Proposed PHMA: 4,960
	Controlled Surface Use	5,015,210 PHMA: 3,057,700 GHMA: 1,922,240	0	0	2,117,990 PHMA: 1,394,490 GHMA: 723,500	6,438,480 PHMA: 5,539,210 GHMA: 761,940 FS Proposed PHMA: 137,320
Rights-of-Way	Exclusion Areas	285,930 PHMA: 145,000 GHMA: 140, 930	5,271,440 PHMA: 5,033,240 GHMA: 140,920	11,556,490 PHMA: 5,058,390 GHMA: 6,498,040	5,230,110 PHMA: 5,033,240 GHMA: 196,860	285,930 PHMA: 145,000 GHMA: 140,930

Resource/Activity	Land Use Restriction	Alternative A (Continuation of Existing Management) (acres)	Alternative B - (acres)	Alternative C (acres)	Alternative D (acres)	Proposed LUP Amendments (acres)
						FS Proposed PHMA: 0
	Avoidance Areas	2,460,340 PHMA: 1,249,560 GHMA: 1,210,760	6,357,180 PHMA: 0 GHMA: 6,357,120	0	1,300,510 PHMA: 0 GHMA: 1,300,510	6,208,990 PHMA: 4,886,230 GHMA: 1,197,550 FS Proposed PHMA: 125,200
Mineral Materials	Closed Areas	472,800 PHMA: 472,800 GHMA: 0	6,992,690 PHMA: 6,992,690 GHMA: 0	6,992,690 PHMA: 6,992,690 GHMA: 0	472,800 PHMA: 472,800 GHMA: 0	472,800 PHMA: 472,800 GHMA: 0 FS Proposed PHMA:
Locatable Minerals	Existing Withdrawals	1,761,550 PHMA: 1,761,550 GHMA: 0	1,761,550 PHMA: 1,761,550 GHMA: 0	1,761,550 PHMA: 1,761,550 GHMA: 0	1,761,550 PHMA: 1,761,550 GHMA: 0	1,761,550 PHMA: 1,761,550 GHMA: 0 FS Proposed PHMA: 0
	Proposed Withdrawals	131,070 PHMA: 131,070 GHMA: 0	5,118,070 PHMA: 5,118,070 GHMA: 0	5,118,070 PHMA: 5,118,070 GHMA: 0	131,070 PHMA: 131,070 GHMA:	252,070 PHMA: 252,070 GHMA: 0 FS Proposed PHMA: 0
	Considered for Proposed Withdrawal					894,060 PHMA: 894,050 GHMA: 10 FS Proposed PHMA: 0
Solid Leasable Minerals (non-energy)	Closed Areas	261,000 PHMA: 261,000 GHMA: 0	6,992,690 PHMA: 6,992,690 GHMA: 0	6,992,690 PHMA: 6,992,690 GHMA: 0	261,000 PHMA: 261,000 GHMA: 0	483,420 PHMA: 333,170 GHMA:

Resource/Activity	Land Use Restriction	Alternative A (Continuation of Existing Management) (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)	Proposed LUP Amendments (acres)
						FS Proposed PHMA: 150,250
Wind Energy	Excluded	424,820 PHMA: 424,820 GHMA: 0	5,033,240 PHMA: 5,033,240 GHMA: 0	11,531,340 PHMA: 5,033,240 GHMA: 6,498,040	424,820 PHMA: 424,820 GHMA: 0	425,080 PHMA: 424,820 GHMA: 0 FS Proposed PHMA: 260
	Avoided	2,438,850 PHMA: 2,438,850 GHMA: 0	0	0	4,608,420 PHMA: 4,608,420 GHMA: 0	4,731,350 PHMA: 4,606,404 GHMA: 0 FS Proposed PHMA: 124,950

Table 2-8 shows the number of acres of surface and subsurface acres (for conventional oil and gas exploration and development) that are subject to leasing restrictions designed to protect sage-grouse habitat. The acreage values provided in the table are organized by the type and level of restriction and mineral development potential.

Table 2-8. Areas of Fluid Mineral Lease Conditional Requirements by Hydrocarbon Potential for Conventional Oil and Gas

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)							
	None	Negligible	Very Low	Low	Moderate	High	Very High	Total[3]
ALTERNATIVE A (Continuation of Existing Management)								
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	2,319,851	41,271	3,863,490	7,016,828	1,538,958	412,128	442,160	15,634,685
Available for Leasing, Subject to Moderate Constraints[1]	276,972	25,862	1,300,342	2,198,260	708,182	232,664	256,328	4,998,611
Available for Leasing, Subject to Major Constraints[1]	2,885	629	3,500	24,324	5,426	1,831	2,145	40,740

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)							
	None	Negligible	Very Low	Low	Moderate	High	Very High	Total[3]
Unavailable for Leasing[2]	137,065	0	234,397	347,079	104,053	690	0	823,282
ALTERNATIVE B								
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	2,154,973	57,855	3,208,177	6,394,476	1,719,525	526,128	473,428	14,534,562
Available for Leasing, Subject to Moderate Constraints[1]	0	0	0	0	0	0	0	0
Available for Leasing, Subject to Major Constraints[1]	6,116	848	517,749	1,142,075	247,857	70,186	130,530	2,115,360
Closed to Leasing[2]	581,593	2,636	2,174,606	3,120,380	627,450	115,920	214,123	6,836,707
ALTERNATIVE C								
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	1,028,865	0	1,147,529	513,682	3,162	0	176	2,693,385
Available for Leasing, Subject to Moderate Constraints[1]	0	0	0	0	0	0	0	0
Available for Leasing, Subject to Major Constraints[1]	6,116	848	517,749	1,142,075	247,857	70,186	130,530	2,115,360
Closed to Leasing[2]	1,240,940	60,491	4,235,212	7,400,709	2,271,151	635,110	687,370	16,530,983
ALTERNATIVE D								
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	2,438,029	46,858	4,588,825	8,185,370	1,994,701	537,344	546,880	18,338,007
Available for Leasing, Subject to Moderate Constraints[1]	163,561	13,633	521,033	944,064	241,170	92,590	140,672	2,116,723
Available for Leasing, Subject to Major Constraints[1]	0	0	0	0	0	0	0	0
Closed to Leasing[2]	134,976	0	272,925	385,427	111,105	12,113	0	916,546

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)							
	None	Negligible	Very Low	Low	Moderate	High	Very High	Total[3]
Proposed LUP Amendments								
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	2,122,860	39,647	3,117,385	6,027,392	1,545,737	449,577	356,426	13,659,024
Available for Leasing, Subject to Moderate Constraints[1]	453,460	20,616	1,901,137	2,914,424	652,380	179,555	314,603	6,436,176
Available for Leasing, Subject to Major Constraints[1]	23,209	227	127,778	218,351	43,096	12,227	16,522	441,411
Closed to Leasing[2]	137,036	0	236,485	354,681	105,762	689	0	834,652

[1]All activities would be subject to intensive mitigation, including offsite placement of facilities; remote control monitoring; restricted or prohibited surface use, including road construction; multiple wells from a single pad; central tank batteries and facilities; pipelines and power lines concentrated in specific areas; etc., based on site-specific analysis.
[2]Although closed to leasing and related oil and gas activity, any other surface disturbing or disrupting use would follow the surface disturbance prescriptions.
[3]Acreage values to not include areas that have not been assessed.

Table 2-9 shows the number of acres of surface and subsurface acres (for coalbed natural gas exploration and development) that are subject to leasing restrictions designed to protect sage-grouse habitat. The acreage values provided in the table are organized by the type and level of restriction and mineral development potential.

Table 2-9. Areas of Fluid Mineral Lease Conditional Requirements by Hydrocarbon Potential for Coalbed Natural Gas

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)						
	None	Negligible	Very Low	Low	Moderate	High	Total[3]
ALTERNATIVE A (Continuation of Existing Management)							
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	9,899,624	602,655	2,630,488	1,962,153	407,322	141,227	15,643,480
Available for Leasing, Subject to Moderate Constraints[1]	2,594,430	174,497	953,545	866,436	217,570	187,563	4,944,041
Available for Leasing, Subject to Major Constraints[1]	13,3406	1,829	6,654	11,658	2,573	4,761	40,811
Unavailable for Leasing[2]	439,353	0	366,675	8,831	8,432	4	823,295

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)						
	None	Negligible	Very Low	Low	Moderate	High	Total[3]
ALTERNATIVE B							
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	8,805,828	463,824	2,711,981	1,847,374	473,441	243,560	14,546,007
Available for Leasing, Subject to Moderate Constraints[1]	0	0	0	0	0	0	0
Available for Leasing, Subject to Major Constraints[1]	966,958	149,613	402,605	475,957	76,040	43,633	2,114,806
Closed to Leasing[2]	4,117,974	301,242	1,206,325	989,580	139,585	74,852	6,829,557
ALTERNATIVE C							
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	2,493,007	1,077	167,481	35,214	1,874	779	2,699,431
Available for Leasing, Subject to Moderate Constraints[1]	0	0	0	0	0	0	0
Available for Leasing, Subject to Major Constraints[1]	966,958	149,613	402,605	475,957	76,040	43,633	2,114,806
Closed to Leasing[2]	8,697,240	763,988	3,435,448	2,708,313	605,644	317,634	16,528,266
ALTERNATIVE D							
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	11,342,970	636,135	3,110,654	2,470,954	525,963	255,510	18,342,187
Available for Leasing, Subject to Moderate Constraints[1]	1,144,201	89,502	405,023	336,566	78,631	62,900	2,116,821
Available for Leasing, Subject to Major Constraints[1]	0	0	0	0	0	0	0
Closed to Leasing[2]	436,631	39,428	402,632	29,432	8,434	4	916,559
Proposed LUP Amendments							
Available for Leasing, Subject to the Terms and Conditions of the Standard Lease Form	8,503,013	447,236	2,454,356	1,651,238	416,846	197,489	13,670,178

Fluid Mineral Lease Conditional Requirement	Hydrocarbon Development Potential (acres)						
	None	Negligible	Very Low	Low	Moderate	High	Total[3]
Available for Leasing, Subject to Moderate Constraints[1]	3,714,345	303,641	1,020,366	1,104,506	176,423	110,918	6,430,199
Available for Leasing, Subject to Major Constraints[1]	261,220	12,188	71,431	72,359	11,324	10,002	440,525
Closed to Leasing[2]	445,225	0	372,155	8,850	8,432	4	843,665

[1]All activities would be subject to intensive mitigation, including offsite placement of facilities; remote control monitoring; restricted or prohibited surface use, including road construction; multiple wells from a single pad; central tank batteries and facilities; pipelines and power lines concentrated in specific areas; etc., based on site-specific analysis.
[2]Although closed to leasing and related oil and gas activity, any other surface disturbing or disrupting use would follow the surface disturbance prescriptions.
[3]Acreage values to not include areas that have not been assessed.

Table 2-10. Reasonably Foreseeable Development Scenario for Federal Oil and Gas and Coalbed Natural Gas Wells and Associated Surface Disturbance Acres

Analysis Area		Alternative A (BLM/Forest Service Wells)		Alternative B (BLM/Forest Service Wells)		Alternative C (BLM/Forest Service Wells)		Alternative D (BLM/Forest Service Wells)		Proposed LUP Amendments (BLM/Forest Service Wells)	
		O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG
Casper Field Office	Sage-grouse Core/Priority Areas	496	105	76	6	76	6	430	88	284	52
	Disturbance Acres*	4,960		730		730		4,280		2,810	
	Sage-grouse General Habitat	563	403	564	409	441	374	562	408	550	406
	Disturbance Acres*	5,340		5,370		4,360		5,350		5,260	
	Total Wells	**1,059**	**508**	**639**	**415**	**517**	**380**	**992**	**496**	**834**	**458**
	Total Disturbance Acres*	**10,300**		**6,100**		**5,090**		**9,640**		**8,070**	
Kemmerer Field Office	Sage-grouse Core/Priority Areas	168	84	50	4	50	4	146	73	98	49
	Disturbance Acres*	1,990		490		490		1,740		1,160	

Analysis Area		Alternative A (BLM/Forest Service Wells)		Alternative B (BLM/Forest Service Wells)		Alternative C (BLM/Forest Service Wells)		Alternative D (BLM/Forest Service Wells)		Proposed LUP Amendments (BLM/Forest Service Wells)	
		O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG
	Sage-grouse General Habitat	534	200	546	206	454	112	545	206	545	206
	Disturbance Acres*	5,310		5,430		4,210		5,420		5,420	
	Total Wells	**702**	**285**	**595**	**210**	**504**	**116**	**691**	**279**	**642**	**255**
	Total Disturbance Acres*	**7,300**		**5,920**		**4,700**		**7,160**		**6,580**	
Newcastle Field Office	Sage-grouse Core/Priority Areas	67	11	10	0	10	0	57	9	43	4
	Disturbance Acres*	550		80		80		460		340	
	Sage-grouse General Habitat	165	13	167	14	114	0	165	13	165	13
	Disturbance Acres*	1,230		1,250		820		1,230		1,230	
	Sage-grouse Connectivity Habitat	71	0	73	0	42	0	63	0	68	0
	Disturbance Acres*	400		400		240		360		380	
	Total Wells	**303**	**23**	**250**	**14**	**166**	**0**	**285**	**21**	**276**	**17**
	Total Disturbance Acres*	**2,180**		**1,650**		**1,060**		**1,590**		**1,620**	
Pinedale Field Office	Sage-grouse Core/Priority Areas	447	45	14	2	14	2	160	31	154	18
	Disturbance Acres*	5,610		180		180		2,090		1,950	
	Sage-grouse General Habitat	4,246	328	4,429	341	3,996	240	4,278	333	4,263	333
	Disturbance Acres*	33,870		35,320		31,530		34,130		34,020	
	Total Wells	**4,693**	**373**	**4,443**	**343**	**4,010**	**242**	**4,438**	**364**	**4,416**	**351**
	Total Disturbance Acres*	**39,480**		**35,500**		**31,710**		**36,220**		**35,960**	

Analysis Area		Alternative A (BLM/Forest Service Wells)		Alternative B (BLM/Forest Service Wells)		Alternative C (BLM/Forest Service Wells)		Alternative D (BLM/Forest Service Wells)		Proposed LUP Amendments (BLM/Forest Service Wells)	
		O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG
Rawlins Field Office	Sage-grouse Core/Priority Areas	405	546	172	153	172	153	352	481	253	357
	Disturbance Acres*	6,120		2,210		2,210		5,360		3,910	
	Sage-grouse General Habitat	1,436	785	1,498	820	857	611	1,472	809	1,472	809
	Disturbance Acres*	15,170		15,830		9,770		15,580		15,580	
	Total Wells	**1,841**	**1,331**	**1,670**	**973**	**1,029**	**764**	**1,824**	**1,291**	**1,725**	**1,167**
	Total Disturbance Acres*	**21,290**		**18,030**		**11,970**		**20,930**		**19,480**	
Rock Springs Field Office	Sage-grouse Core/Priority Areas	2,188	37	1,101	2	1,101	2	1,977	31	1,598	12
	Disturbance Acres*	25,600		12,790		12,790		23,110		16,460	
	Sage-grouse General Habitat	2,573	111	2,601	114	2,149	61	2,586	113	2,585	113
	Disturbance Acres*	20,820		21,060		17,230		20,930		20,920	
	Total Wells	**4,761**	**149**	**3,702**	**117**	**3,250**	**63**	**4,564**	**144**	**4,183**	**126**
	Total Disturbance Acres*	**46,410**		**33,850**		**30,020**		**44,050**		**37,380**	
Bridger-Teton National Forest	Sage-grouse Core/Priority Areas	0	0	0	0	0	0	0	0	0	0
	Disturbance Acres*	0		0		0		0		0	
	Sage-grouse General Habitat	158	9	159	10	26	0	158	9	158	9
	Disturbance Acres*	2,010		2,020		320		2,010		2,0104	
	Total Wells	**158**	**9**	**159**	**10**	**26**	**0**	**158**	**9**	**158**	**9**
	Total Disturbance Acres*	**2,013**		**2,019**		**319**		**2,014**		**2,010**	

Analysis Area		Alternative A (BLM/Forest Service Wells)		Alternative B (BLM/Forest Service Wells)		Alternative C (BLM/Forest Service Wells)		Alternative D (BLM/Forest Service Wells)		Proposed LUP Amendments (BLM/Forest Service Wells)	
		O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG	O&G	CBNG
Thunder Basin National Grasslands	Sage-grouse Core/Priority Areas	44	11	2	0	2	0	38	9	26	7
	Disturbance Acres*	410		19		19		360		260	
	Sage-grouse General Habitat	93	70	94	73	30	27	94	72	94	72
	Disturbance Acres*	950		970		260		960		960	
	Total Wells	**136**	**81**	**96**	**73**	**32**	**27**	**131**	**82**	**120**	**80**
	Total Disturbance Acres*	**1,360**		**990**		**280**		**1,320**		**1,220**	
Medicine Bow National Forest	Sage-grouse Core/Priority Areas	0	0	0	0	0	0	0	0	0	0
	Disturbance Acres*	0		0		0		0		0	
	Sage-grouse General Habitat	0	0	0	0	0	0	0	0	0	0
	Disturbance Acres*	0		0		0		0		0	
	Total Wells	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Total Disturbance Acres*	**0**		**0**		**0**		**0**		**0**	
Total Wells		**13,653**	**2,758**	**11,555**	**2,154**	**9,533**	**1,594**	**13,083**	**2,686**	**12,355**	**2,462**
Total Disturbance Acres*		**130,330**		**104,050**		**85,140**		**122,910**		**112,330**	

*Acreages are for short-term surface disturbance acres

2.10 Detailed Description of Draft Alternatives

2.10.1 How to Read Table 2-11

The following describes how Table 2-11 Description of Draft Alternatives, below, is written and formatted to show the land use plan decisions proposed for each alternative.

In accordance with Appendix C of the BLM's *Land Use Planning Handbook* (H-1601-1), LUP and LUP amendment decisions are broad-scale decisions that guide future land management actions and subsequent site-specific implementation decisions (BLM 2005). LUP decisions fall into two categories, which establish the base structure for desired outcomes (goals and objectives), and allowable uses and actions to achieve outcomes.

- Goals are broad statements of desired outcomes that usually are not quantifiable.
- Objectives identify specific desired outcomes for resources. They may be quantifiable and measurable and may have established timeframes for achievement, as appropriate.
- Allowable uses identify uses, or allocations, that are allowable, restricted, or prohibited on BLM-administered lands and mineral estate.
- Actions identify measures or criteria to achieve desired objectives, including actions to maintain, restore, or improve land health.

Stipulations (prohibitions and restrictions on surface occupancy/disturbance, which fall under the allowable uses category) are also applied to surface-disturbing activities to achieve desired outcomes (i.e., objectives).

In general, only those resources and resource uses that have been identified as planning issues have notable differences among the alternatives.

Actions that are applicable to all alternatives are shown in one cell across a row. These particular objectives and actions would be implemented regardless of which alternative is ultimately selected.

Actions that are applicable to more than one but not all alternatives are indicated by either combining cells for the same alternatives, or by denoting those objectives or actions as the "same as Alternative A," for example.

In some cells, "No Similar Action" is used to indicate that there is no similar goal, objective or action to the other alternatives, or that the similar goal, objective or action is reflected in another management action in the alternative.

2.10.2 Management Goals for Alternatives A and D

1. Conserve, recover, and enhance sage-grouse habitat on a landscape scale consistent with local, state, and federal management plans and policies, as practical, while providing for multiple use of BLM-administered lands and National Forest System lands.

2. Maintain and/or increase sage-grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other state, local, industry, permittee and conservation partners.

2.10.3 Management Goal for Alternative B

1. Maintain and/or increase sage-grouse abundance and distribution by conserving, enhancing, or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners.

2.10.4 Management Goal for Alternative C

1. Maintain and increase current sage-grouse abundance and distribution by conserving, enhancing, or restoring the sagebrush ecosystem.

2.10.5 Management Objectives for Alternatives B, C, and D

1. In cooperation with State of Wyoming and its agencies, local governments, private landowners, local sage-grouse working groups, partners and stakeholders, develop site-specific conservation strategies to maintain or enhance sage-grouse habitats and habitat connectivity.

2. Enhance quality/suitable habitat to support the expansion of sage-grouse populations on federally-administered lands within the planning areas.

3. Manage sage-grouse seasonal habitats and maintain habitat connectivity to support population objectives set by the State of Wyoming in cooperation with the agencies.

4. Identify and prioritize opportunities for habitat enhancement and conservation within sage-grouse core habitat areas based on threats and the ability to manage sage-grouse habitat.

5. Restore native (or desirable) plants and create landscape patterns which most benefit sage-grouse.

6. Develop specific objectives to conserve, enhance or restore sage-grouse priority habitat based on ESD (Forest Service may use other methods) and BLM land health evaluations (including within wetland and riparian areas) taking into account site history (historic treatments or habitat manipulations) that have changed the soil chemistry possibly altering the ESD. If an effective grazing system that meets sage-grouse habitat requirements is not already in place, analyze at least one alternative that conserves, restores, or enhances sage-grouse habitat in the NEPA document prepared for grazing management (Doherty et al. 2011b, Williams et al. 2011).

7. Establish measurable objectives related to sage-grouse habitat from baseline monitoring data, ESDs (Forest Service may use other methods), or land health assessments/evaluations.

8. Manage for vegetation composition and structure consistent with ecological site potential (Forest Service may use other methods) to achieve sage-grouse seasonal habitat objectives.

9. Incorporate available site information collected using the Sage-Grouse Habitat Assessment Framework or similar methods to evaluate existing resource conditions and to develop any necessary resource solutions in cooperation with State of Wyoming and its agencies, the local governments, private landowners, project proponents, partners, and stakeholders.

10. Incorporate management practices that will provide for maintenance and/or enhancement of sage-grouse habitats, including specific attention to maintenance of desired understories of sagebrush plant communities. When developing objectives for residual cover and species diversity, identify the ecological site types within the planning area and refer to the appropriate ESDs (Forest Service may use other methods).

11. In determining appropriate management actions that will be considered, refer to the document, "Grazing Influence, Management, and Objective Development in Wyoming's Greater Sage-Grouse Habitat" (Cagney et al. 2010) for guidance.

2.10.6 Management Objectives for Alternative B

1. Protect priority sage-grouse habitats from anthropogenic disturbances that will reduce distribution or abundance of sage-grouse.

2. Manage wild horse population levels within established AMLs.

3. Prioritize wild horse gathers in sage-grouse priority habitat, unless removals are necessary in other areas to prevent catastrophic environmental issues, including herd health impacts.

4. Write specific land use plan objectives for vegetation that connects habitats and creates patterns that benefit sage-grouse. Write specific vegetation management objectives relative to invasive annual grass spread and woody plant removal where these are of concern in sage-grouse habitat. Consider management objectives in buffers around intact priority habitats that detect and rapidly respond to invasions in the buffer zones.

2.10.7 Management Sub-Objectives for Alternative B

1. Designate priority sage-grouse habitats for each WAFWA management zone (Stiver et al. 2006) across the current geographic range of sage-grouse that are large enough to stabilize populations in the short term and enhance populations over the long term.

2. To maintain or increase current populations, manage or restore priority areas so that at least 70% of the land cover provides adequate sagebrush habitat to meet sage-grouse needs.

3. Develop quantifiable habitat and population objectives with WAFWA and other conservation partners at the management zone and/or other appropriate scales. Develop a monitoring and adaptive management strategy to track whether these objectives are being met, and allow for revisions to management approaches if they are not.

4. An additional objective will be designated for the priority area to prioritize and reclaim/restore anthropogenic disturbances so that 3% or less of the total priority habitat area is disturbed within 10 years.

5. Quantify and delineate general habitat for capability to provide connectivity among priority areas (Knick and Hanser 2011).

6. Conserve, enhance, or restore sage-grouse habitat and connectivity (Knick and Hanser 2011) to promote movement and genetic diversity, with emphasis on those habitats occupied by sage-grouse.

7. Enhance general sage-grouse habitat such that population declines in one area are replaced elsewhere within the habitat.

8. Assess general sage-grouse habitats to determine potential to replace lost priority habitat caused by perturbations and/or disturbances and provide connectivity (Knick and Hanser 2011) between priority areas. These habitats should be given some priority over other general sage-grouse habitats that provide marginal or substandard sage-grouse habitat.

9. Restore historical habitat functionality to support sage-grouse populations guided by objectives to maintain or enhance connectivity. Total area and locations will be determined at the land use plan level.

2.10.8 Management Objectives for Alternative C

1. Restore and maintain sagebrush steppe to its ecological potential in occupied sage-grouse habitat.

2. Establish a system of sagebrush reserves to anchor recovery efforts by protecting the highest quality habitats.

3. Develop and implement methods for prioritizing and restoring sagebrush steppe invaded by non-native plants.

4. Encourage partners to monitor effects of retiring grazing permits in sage-grouse habitat.

5. Any oil, gas, or geothermal activity will be conducted to maximize avoidance of impacts, based on evolving scientific knowledge of impacts.

6. Manage wild horse population levels within established AMLs.

7. Prioritize wild horse gathers in sage-grouse priority habitat, unless removals are necessary in other areas to prevent catastrophic environmental issues, including herd health impacts.

8. Establish a system of sagebrush reserves to anchor recovery efforts by protecting the highest quality habitats.

2.10.9 Management Objectives for Alternative D

1. Identify core/priority, general, and connectivity habitats for each WAFWA MZ across the current geographic range of Greater Sage-Grouse that are large enough to stabilize populations in the short term and enhance populations over the long term. Greater Sage-Grouse habitat in this planning area overlaps 2 WAFWA MZs: (1) MZ I-Great Plains and (2) MZ II-Wyoming Basin.

2. Protect core/priority, general, and connectivity habitats from anthropogenic disturbance that will reduce distribution or abundance of Greater Sage-Grouse.

2.11 DETAILED COMPARISON OF ALTERNATIVES

Table 2-11. Detailed Comparison of Alternatives

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		General Management Direction		
1		Continue to support the development of statewide sage-grouse seasonal habitat models for the State of Wyoming.		
2		Field offices and ranger districts will work with project proponents, partners, and stakeholders to avoid or minimize impacts and/or implement direct mitigation (e.g., relocating disturbance, timing restrictions, etc.), and utilize BMPs and offsite compensatory mitigation where appropriate.		
3		Utilize the Wyoming SGIT and Local Working Group plans or other state or cooperatively-developed plans, analyses, and other sources of information to guide development of conservation objectives for local management of sage-grouse habitats. The BLM and Forest Service will collaborate with appropriate federal agencies, and the State of Wyoming as contemplated under Governor Executive Order 2013-3, to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater Sage-Grouse conservation objectives are not being achieved on federal land, to determine if a causal relationship exists between improper grazing (by wildlife or wild horses or livestock) and Greater Sage-Grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater Sage-Grouse conservation objectives within the framework.		
4		Include the collection of baseline data and outline post-project monitoring components into project planning, as appropriate and necessary.		
5		The BLM and Forest Service will coordinate new recommendations, mitigation, and conservation measures applied for sage-grouse with the WGFD and other appropriate agencies, local government cooperators, and the Wyoming SGIT. These measures will be analyzed in site-specific NEPA documents, as necessary.		
6		Apply appropriate seasonal restrictions for implementing vegetation management treatments according to the type of seasonal habitats present in a priority area. Vegetation treatments must include monitoring to determine achievement of objectives and their long-term success.		
7		Ensure site-specific, measurable, conservation and mitigation objectives are included in project planning within sage-grouse habitats.		
8		Each BLM field office will develop landscape-scale restoration, conservation, and maintenance strategies, including special management of seasonal habitats and identified connectivity zones outside of PHMAs, working with voluntary partners and cooperating agencies. These strategies must be coordinated and reconciled, where possible, with adjoining management entities that share habitats or populations.		
9		Design all range projects in a manner that minimizes potential for invasive species establishment. Monitor and treat invasive species associated with existing range improvements.		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
10		Apply all desired required design features (Appendix B) as mandatory Stipulations/COAs within PHMAs for fluid minerals, travel management, lands and realty, range management, wild horses, coal exploration, locatable mineral location and entry, West Nile Virus, mineral materials, non-energy solid leasable minerals, vegetation management, fire and fuels management, and noise.		
11		Integrated vegetation management would be used to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2. Manage weed treatments to maintain and improve Greater Sage-Grouse habitat. Apply Required Design Features and BMPs as Conditions of Approval, such as those in Appendix B.		
12		Existing notices and approved plans of operations under 43 CFR 3809[4]: For projects that overlap PHMAs, operators may be requested to submit modifications to the accepted notice or approved plan of operations so that the operations minimally impact PHMAs (core only). The AO may convey to the operator suggested conservation measures, based upon the notice or plan level operations and the geographic area of those operations (also called the project area, which is defined by the BLM in 43 CFR 3809.5 and the Forest Service in 36 CFR 228.3). These suggested conservation measures include measures that support the overall goals and objectives of the priority/core population area strategy and may not be reasonable or applicable to the BLM/Forest Service's determination of whether the proposed operations will cause unnecessary or undue degradation under 43 CFR 3809.5 or likely cause a significant disturbance of surface resources under 36 CFR 228.4. The request containing the suggested conservation measures must make clear that the operator's compliance is not mandatory. Notices or plans of operation, or modifications thereto, submitted following the issuance of this guidance: As part of the 15-day completeness review of notices (or modifications thereto) and 30-day completeness review of plans of operations (or modifications thereto), the proposed project area(s) where exploration, development, mining, access and reclamation would take place should be reviewed for overlap of PHMAs in the corporate GIS database. If there is overlap, the BLM and Forest Service AO may notify the operator of ways that they may minimize impacts to PHMAs (core only) and request the operator to amend its notice or plan to include such measures. The request to amend the submitted notice or plan of operations must make clear that the operator's compliance is not mandatory and that including such measures is not a requirement for completeness of either the notice or a plan of operations, nor is it a condition of acceptance of the notice or approval of the plan of operations.		
13		As new occupied sage-grouse habitat is found or occurs either through additional inventories or expansion into previously unoccupied habitat, the BLM will incorporate, through appropriate processes and analyses, these areas into the GHMA category and manage them as such, until the earliest review occurs by the SGIT. At that time they will be considered for PHMA status or continue to be managed as GHMAs, and will be added to the statewide map at that time.		
14		Contribute to actions that help to ground-truth the statewide sage-grouse seasonal habitat models for the State of Wyoming.		
15		Use the Sage-grouse Habitat Assessment Framework or best available assessment tool (approved by the AO/Responsible Official) when assessing or evaluating sage-grouse habitats at multiple scales.		
16		The official Wyoming sage-grouse lek database is maintained by the WGFD in accordance with Appendix 4B of the Umbrella MOU between the WGFD and BLM and Forest Service (WGFD and BLM 1990).		

[4] *These regulations apply to the exploration and development of locatable minerals on placer claims and lode claims, as well as exploration on tunnel sites and mineral processing operations on mill sites The location and maintenance of claims and sites are regulated under 43 CFR Subpart 3830.*

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		The MOU states that agencies will meet at least annually to coordinate and review the accuracy of data, and incorporate the most up-to-date information.		
17		Many sage-grouse seasonal habitats within and outside of PHMAs (core only) are encumbered by valid existing rights, such as mineral leases or existing rights-of-way. Fluid mineral leases often will include less stringent lease stipulations than the timing, distance, and density requirements identified for consideration in this plan. The BLM will work with proponents holding valid existing leases that include less stringent lease stipulations than the timing, distance, and density restrictions described within this plan to ensure that measurable sage-grouse conservation objectives (such as, but not limited to, consolidation of infrastructure to reduce habitat fragmentation and loss, and effective conservation of seasonal habitats and habitat connectivity to support management objectives set by the WGFD) are included in all project proposals.		
18		Areas within PHMAs would be limited to designated roads, primitive roads, and trails. Individual route designations will occur during subsequent implementation level travel management planning. Until implementation level travel management plans and route designations are complete, motorized travel will be limited to existing roads, and trails.		
19		Complete activity-level travel plans within five years of the ROD for this planning effort. During activity level planning, where appropriate, designate routes in PHMAs with current administrative/agency purpose or need to administrative access only. Existing plans should be assessed for consistency with sage-grouse conservation objectives.		
20		Construct roads needed for production activities to minimum design standards within PHMAs, in compliance with the DDCT process.		
21		Field office and ranger district staff will work with project proponents (including those within the BLM/Forest Service) and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats.		
22		Evaluate opportunities to coordinate management plans and strategies on multiple allotments where coordination under a single management plan/strategy would result in enhancing Greater Sage-Grouse populations or its habitat, as determined in coordination with the state wildlife agency and with project proponents, partners, and stakeholders.		
23		Management Action 23 has been moved to Management Action 137.		
24		Management Action 24 has been moved to Management Action 138.		
25		All existing LUP decisions will be retained unless vacated or modified by decisions in these plan amendments. Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by these LUP amendments.		
26		Fire and fuels management actions would be designed to contribute to the protection and enhancement of sagebrush habitat that support Greater Sage-Grouse populations (including large contiguous blocks of sagebrush).		
27		BLM and Forest Service planning units (Districts and Forests), in coordination with the USFWS and relevant state agencies would complete and continue to update Greater Sage-Grouse Landscape Wildfire & Invasive Species Habitat Assessments to prioritize at-risk habitats, and identify fuels management, preparedness, suppression and restoration priorities necessary to maintain sagebrush habitat to support interconnecting Greater Sage-Grouse populations. These assessments and subsequent assessment updates		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		would also be a coordinated effort with an IDT to take into account other Greater Sage-Grouse priorities identified in this plan. Appendix J describes a minimal framework example and suggested approach for this assessment. Implementation actions will be tiered to the Local (District/Forest) Greater Sage-Grouse Landscape Wildfire & Invasive Species Assessment using the best available science related to the conservation of Greater Sage-Grouse. In coordination with USFWS and relevant state agencies, BLM and Forest Service planning units (districts/forests) will identify annual treatment needs for wildfire and invasive species management as identified in local unit level Landscape Wildfire and Invasive Species Assessments. Annual treatment needs will be coordinated across state/regional scales and across jurisdictional boundaries for long-term conservation of Greater Sage-Grouse. These landscape assessment implementation efforts will be reviewed annually with appropriate USFWS and state agency personnel.		
28		Implement a coordinated inter-agency approach to fire restrictions based upon National Fire Danger Rating System (NFDRS) thresholds (fuel conditions, drought conditions, and predicted weather patterns) for Greater Sage-Grouse habitat.		
29		Within acceptable risk levels, utilize a full range of fire management strategies and tactics, including the management of wildfires to achieve resource objectives across the range of sage-grouse habitat consistent with land use plan direction.		
29a		In order to avoid surface-disturbing activities in PHMAs, priority will be given to development of oil and gas and other mineral resources outside of PHMAs, subject to applicable stipulations. When authorizing development of oil and gas and other mineral resources in PHMAs, subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse.		
Lands and Realty Management				
Rights-of-Way (e.g., Power lines, Transmission, Wind Energy Projects)				
30	Portions of sage-grouse core and general habitat areas would be managed as ROW exclusion areas (Map 2-9).	Priority sage-grouse habitat areas would be managed as exclusion areas for new BLM ROW or Forest Service SUA permits (Map 2-10). Consider the following exceptions: 1. Within designated ROW or SUA corridors encumbered by existing ROW or SUA authorizations, new ROWs could be co-located only if the entire footprint of the proposed project (including construction and staging) can be completed within the existing disturbance associated with the authorized ROWs or SUAs. 2. Subject to valid, existing rights where new ROWs or SUAs associated with	Sage-grouse priority and general habitat areas would be managed as ROW exclusion areas for new ROW or SUA permits (Map 2-11). Consider the following exceptions: 1. Within designated ROW or SUA corridors encumbered by existing ROW or SUA authorizations, new ROWs and SUAs could be co-located only if the entire footprint of the proposed project (including construction and staging) can be completed within the existing disturbance associated with the authorized ROWs or SUAs.	In addition to Alternative A: Sage-grouse core and connectivity habitat areas would be managed as ROW exclusion areas for new ROW or SUA permits (Map 2-12). Consider the following exceptions: 1. Within designated ROW corridors encumbered by existing ROW or SUA authorizations, new ROWs and SUAs could be co-located within the designated corridors. 2. Subject to valid existing rights including non-federal land inholdings, required new ROWs and SUAs would be co-located within existing ROWs or SUAs or where it best minimizes sage-

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		valid existing rights are required, new ROWs or SUAs would be co-located within existing ROWs or SUAs or where it best minimizes sage-grouse impacts. Existing roads or realignments, as described above, would be used to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, additional effective mitigation would be evaluated and implemented on a case-by-case basis to offset the resulting loss of sage-grouse habitat.	2. Subject to valid, existing rights where new ROWs or SUAs associated with valid existing rights are required, new ROWs and SUAs would be co-located within existing ROWs or SUAs or where it best minimizes sage-grouse impacts. Existing roads or realignments, as described above, would be used to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, additional mitigation that has been demonstrated to be effective would be used to offset the resulting loss of sage-grouse habitat.	grouse impacts. Existing roads or realignments, as described above, would be used to access valid existing rights that are not yet developed. 3. If valid existing rights cannot be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the core habitat area. If that disturbance exceeds 9% for that area, additional effective mitigation necessary to offset the resulting loss of sage-grouse would be used. If such a ROW or SUA is subsequently relinquished, the AO would require the holder to complete reclamation with objective of ensuring reestablishment of prior affected sage-grouse habitat.
30a	No similar action	No similar action	No similar action	No similar action
31	Portions of sage-grouse general habitat areas would be managed as ROW avoidance areas (Map 2-9).	General sage-grouse habitat areas would be managed as avoidance areas for new ROWs or SUAs, except for areas currently managed as ROW exclusion areas (2-10). Within general sage-grouse habitat where new ROWs/SUAs are necessary, new ROWs/SUAs would be co-located within existing ROWs/SUAs where technically feasible.	No similar action	In addition to Alternative A: General sage-grouse habitat areas would be available for new ROWs or SUAs, subject to BMPs.
32	**Sage-grouse core and connectivity habitat areas:** <u>Casper RMP:</u> No new corridor designations would be made in Bates Hole. When placement of a major ROW facility within a designated	**Sage-grouse priority habitat areas:** New transmission corridors would not be authorized. New above-ground transmission structures would be prohibited both inside and outside existing corridors.	No similar action	**Sage-grouse core and connectivity habitat areas:** New transmission projects would be allowed in existing designated utility corridors (i.e., West Wide Energy Corridor, RMPs, etc.).

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	corridor is not possible, and for smaller ROW and other linear facilities, placement would be adjacent to existing facilities or disturbances. Cross-country placement of ROW and other linear facilities would be allowed only when placement in a designated corridor or adjacent to an existing facility is not practical or feasible. The extent of all surface disturbances would be minimized. No new corridors would be established in the Sand Hills MA; ROWs would be allowed when management objectives for the area can still be achieved. All currently designated corridors would be maintained All special restrictions that apply to types of use/facilities on the corridors would be removed, except as noted for the Oregon Trail Road ROW Corridor, Segment A. The corridors include 351,020 acres, of which 94,580 acres are federal surface. The widths/size of designated corridors would not change. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis. Existing corridors include: 1. Oregon Trail Road Corridor, Segment A 2. Oregon Trail Road Corridor, Segment B 3. Oregon Trail Road Corridor, Segment C 4. Poison Spider/Gas Hills Road Corridor 5. Highway 20-26 Corridor 6. Wyoming Highway 259/U.S. 87 Corridor 7. Wyoming Highway 387 Corridor 8. Lost Cabin-Arminto Road Corridor 9. RMP Change No. 2012-03 10. West wide Energy Corridor			New transmission projects would be allowed within the proposed 2-mile wide transmission line corridor through sage-grouse core habitat population areas in south-central and southwestern Wyoming (see Map 2-15 from WY EO 2011-5). New transmission lines would be authorized if they are constructed within the 2-mile wide corridor between July 1 and March 14 (or between July 1 and November 30 in sage-grouse winter concentration areas). In addition, new transmission lines would be authorized if they are constructed between July 1 and March 14 (or between July 1 and November 30 in sage-grouse winter concentration areas) and within one half mile either side of existing 115 kV or larger transmission lines. New transmission projects may be constructed outside the 2-mile wide corridor and the one-mile wide corridor mentioned above, in consideration of other resources, when it can be demonstrated that the activity will not cause declines in sage-grouse populations through project design and/or mitigation.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	11. Cabin Creek Corridor 12. Existing Oregon Trail Road ROW Corridor, Segment A Oregon Trail Road ROW Corridor, Segment A allows additional ROW facilities provided they are subsurface, surface, or low profile developments. ROW facilities that introduce visual intrusions on the skyline along the corridor would not be allowed. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis, and a new corridor, to be called the Cabin Creek Corridor, would be designated. Future Corridor Adjustments and New Corridor Designations: Future corridor adjustments and new corridor designations would be made only when facility placement within an existing designated corridor is incompatible, unfeasible, or impractical and when the environmental consequences can be adequately mitigated. Problems of technical compatibility between facilities and spacing of facilities in corridors would be solved on a case-by-case basis. Special restrictions applying to types of use/facilities on the corridors would be removed on a case-by-case basis. South Bighorns/Red Wall Management Area: No corridors would be designated; however, ROWs would be allowed on a case-by-case basis when management objectives for the area could still be achieved. <u>Kemmerer RMP:</u>			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Utility corridors would be designated, based on use (i.e., power lines, pipelines, and fiber optic lines). Preferred utility corridors would be 2 miles wide (width would be determined based on resource values) and designated as follows, but variances would be allowed based on application where conflicts with other resources were minimal or could be mitigated through resource-specific stipulations: High-voltage power line corridors would be established north of and parallel to I-80, and along Wyoming State Highway 89 from the junction of I-80 and the Wyoming state line. Fiber optic and low-voltage power line corridors would be located along currently established road systems (e.g., interstate or state highways and paved county roads). <u>Newcastle RMP:</u> Utility/transportation systems would be located adjacent to existing utility/transportation systems whenever practical. Areas to be avoided for new facility placement and routes would be identified on a case-by-case basis, rather than attempting to establish utility corridors. <u>Pinedale RMP:</u> Utility facilities would be restricted to existing routes and designated corridors where practicable, including environmental and socioeconomic considerations. Corridor routes include U.S. Highways 189 and 191 and State Highways 189, 191, 350, 351, 352, 353, and 354. New corridors could be			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	established as oil and gas fields are developed. Rawlins RMP: All BLM-administered public lands, except WSAs and some SD/MAs (including ACEC/SIAs), would be open to consideration for placement of utility ROW systems. Each utility ROW would be located adjacent to existing facilities, when possible. Areas with important or sensitive resource values would be avoided. Existing major transportation and utility ROW routes would be designated corridors. However, major transportation routes within the planning area that are located east of the Carbon County-Albany County line would not be considered for ROW corridor designation because of the scattered public landownership pattern in the area. All corridors would be designated for power lines (above ground and buried), telephone lines, and fiber optic lines. Specific proposals would require site-specific environmental analysis and compliance with established permitting processes. Activities generally excluded from ROW corridors include mineral materials disposal, range and wildlife habitat improvements involving surface disturbance and facility construction, campgrounds, and public recreation facilities and other facilities that would attract public use. ROW facilities would not be placed adjacent to each other if issues with safety or incompatibility or resource conflicts were identified. The designated			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	width, allowable uses, and excluded uses for each corridor may be modified during implementation of the Approved RMP. Green River RMP: Areas designated as utility windows would be preferred locations for future grants. Five windows have been identified: 2 east-west, 3 north-south. Other areas would be considered for rights-of-way on a case-by-case basis. Windows 0.5 mile in width have been identified for the placement of utilities. The northern east-west window would be for underground facilities only, and the southern east-west window would be for both above and below ground facilities. A 0.5 mile wide north-south window on the west side of Flaming Gorge, a window south along Highway 430, and a north-south window along the east side of Flaming Gorge have been identified for above and below ground utilities. JMH CAP: The planning area, with the exception of defined exclusion and avoidance areas, would be open to considering grants of rights-of-way if area objectives could be met. Exclusion areas are closed to rights-of-way. Avoidance and special management areas not identified as exclusion areas would be open to consideration only after site-specific analysis demonstrates area objectives could be met (see glossary) in Greater Sage-Grouse potential nesting habitat. TBNG LRMP: Utility companies would be permitted to construct new utility corridors, unless prohibited by management direction.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	MBNF LRMP: Current utility corridors would be fully utilized. Corridors would be provided in the future in areas that meet the needs of society while protecting the integrity of the environment. BTNF LRMP: Within sage-grouse core habitat areas, disturbance would be limited by co-locating roads, pipelines, gathering lines, and power lines for energy resource development. New roads, pipelines, gathering lines, and technically required overhead power lines would be routed in a manner as to minimize visual impacts and conform to approved corridors. When these facilities leave corridors, they should be subordinate to the landscape.			
33	No similar action	Existing designated ROW corridors crossing sage-grouse priority habitat that are void of any authorized ROWs would be relocated outside of the priority habitat area. If relocation is not possible, the entire corridor would be undesignated during the planning process.	Same as Alternative B	No similar action
34	Kemmerer RMP: New utility lines would be buried or BLM-approved anti-perch devices would be installed on all new utility lines within sagebrush and/or semiarid shrub-dominated habitats, unless NEPA analysis shows little or no impact without burial or modification. BTNF LRMP: Operations would be conducted in a manner that will offer the least possible	No similar action	ROWs would be amended to require features that enhance sage-grouse habitat security. Existing designated corridors in BLM ACECs and Forest Service Special Areas could be accessed for maintenance.	Maintenance of existing structures would be allowed and upgrades would be considered, subject to BMPs.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	disturbance to wildlife on or adjacent to the leased land.			
35	No similar action	Opportunities to remove, bury, or modify existing power lines within priority sage-grouse habitat areas would be evaluated and taken advantage of. Where existing leases or ROWs or SUAs have had some level of development (e.g., road, fence, and well) and are no longer in use, the site would be reclaimed by removing these features and restoring the habitat.	Same as Alternative B	No similar action
Renewable Energy				
36	Wind energy development would be allowed within sage-grouse core and connectivity habitat areas, except in areas that are currently unavailable due to the need to protect sensitive resources (Map 2-29)[1].	No similar action	Wind energy development would be prohibited in sage-grouse priority and general habitat areas (Map 2-31)[1].	In addition to Alternative A: Wind energy development would be avoided in sage-grouse core and connectivity habitat areas (Map 2-32), unless it can be sufficiently demonstrated that the development activity would not result in declines of sage-grouse core and connectivity habitat populations. Sufficient demonstration of "no declines" should be coordinated with the WGFD and USFWS. Areas that are currently unavailable due to the need to protect sensitive resources would remain unavailable to wind energy development[1].
37	No similar action	No similar action	Wind energy development would be sited at least five miles from active sage-grouse leks[1].	No similar action
38	<u>Kemmerer RMP:</u> New MET towers would be avoided within 1 mile of occupied sagebrush obligate habitats, unless anti-perch devices are installed. MET towers relying on guy wires for support would be prohibited in these habitats. Exceptions could be made	In addition to Alternative A: MET towers would be prohibited in sage-grouse priority habitat areas.	Same as Alternative A	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	if NEPA analysis shows little or no impact to sagebrush obligate species. Rawlins RMP: MET towers would be authorized on a case-by-case basis from 0.25 mile to 1 mile of an occupied Greater Sage-Grouse and sharp-tailed grouse lek.			
39	No similar action	No similar action	Industrial solar projects would be prohibited in ACECs and occupied sage-grouse habitats.	No similar action
Land Tenure Adjustments (Acquisitions, Land Exchanges, Transfers and Sales)				
40	Casper RMP: 224,830 acres of public lands are identified as potentially suitable for disposal. At the implementation stage, site-specific analysis with public participation will be conducted. Based on the analysis and public comments received, a determination will be made on whether disposal of the parcel is in the public's best interest. If it is not in the public's best interest, the parcel will be retained in public ownership. Restricted Disposal – dispose of 5,450 acres on a restricted basis. Allow land-use authorizations under FLPMA Section 302(b) leases and permits to meet public demand. Evaluate on a case-by-case basis as proposals are presented. Potential lease and permit areas may include, but are not limited to the following: 1. Areas where there are documented or existing trespass facilities that can be resolved by an authorization under this section	The BLM Forest Service would retain public ownership of sage-grouse priority habitat. Exceptions would be considered where there is mixed ownership and land exchanges would allow for additional or more contiguous federal ownership patterns within the sage-grouse priority habitat area. Under sage-grouse priority habitat areas with minority federal ownership, an additional, effective mitigation agreement would be included for any disposal of federal land. As a final preservation measure, consideration should be given to pursuing a permanent conservation easement.	Same as Alternative B, without exceptions for disposal to consolidate ownership that would be beneficial to sage-grouse.	The BLM and Forest Service would retain ownership of sage-grouse core and connectivity habitats unless economic or other benefits are determined.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	2. Areas along major highways where developments may facilitate public needs 3. Areas in or adjacent to residential, agricultural, commercial, or industrial developments The BLM will pursue acquisition of lands and interest in lands in the South Bighorns/Red Wall area.			
41	Casper RMP: The BLM would pursue acquisition of lands and interest in lands in the Bolton Creek Drainage and Bates Creek areas.	Areas where acquisitions (including subsurface mineral rights) or conservation easements would benefit sage-grouse habitat would be identified.	Same as Alternative B	Same as Alternative A
42	No similar action	Where suitable conservation actions cannot be achieved, the BLM and Forest Service would seek to acquire state and private lands with intact subsurface mineral estate or BLM/National Forest System lands that need subsurface mineral estate by donation, purchase or exchange in order to best conserve, enhance or restore sage-grouse habitat.	The BLM and Forest Service would strive to acquire important private lands in BLM-designated ACECs and Forest Service Sage-Grouse Special Areas. Acquisition will be prioritized over easements.	The BLM and Forest Service would acquire lands based on a variety of economic resources criteria. Land exchanges outside of sage-grouse core and connectivity habitat would be considered if lands can be exchanged for lands within sage-grouse core and connectivity habitat.
43	No similar action	In priority habitat, withdrawal proposals not associated with mineral activity would not be approved unless the land management is consistent with sage-grouse conservation measures. (For example, in a proposed withdrawal for a military training range buffer area, the buffer area would be managed with sage-grouse conservation measures.)	Withdrawal proposals not associated with mineral activity would not be approved unless the land management is consistent with sage-grouse conservation measures. (For example, in a proposed withdrawal for a military training range buffer area, the buffer area would be managed with sage-grouse conservation measures that have been demonstrated to be effective.)	No similar action
Livestock Grazing Management				
44	The BLM policy in WO-IM-2009-007 and BLM Handbook H-4180-1 and a National Forest's LRMP or allotment specific NEPA decision for the Forest Service would be used to evaluate land health	Allotments not meeting standards due to livestock grazing in sage-grouse priority habitat would incorporate a light grazing management strategy utilizing a 20-30% forage allocation for livestock.	Livestock grazing would be prohibited within sage-grouse priority habitat.	Same as Alternative A

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	standards achievement in sage-grouse core habitats and, where not achieved, to determine if existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines, which through this process will identify appropriate actions to address non-achievement and non-conformance. When determining appropriate actions to address non-achievement of land health standards and non-conformance with the guidelines due to existing grazing management practices or levels of grazing use, management actions including but not limited to the following would be considered singly or in combination: 1. Season or timing of use 2. Numbers of livestock (includes temporary non-use or livestock removal) 3. Distribution of livestock use 4. Intensity of use (utilization or stubble height objectives) 5. Kind of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats) 6. Class of livestock (e.g., yearlings versus cow calf pairs) 7. Refer to the document, "Grazing Influence, Management, and Objective Development in Wyoming's Greater Sage-Grouse Habitat" (Cagney et al. 2010) for guidance when considering appropriate management actions to achieve conformance.			
45	No similar action	In priority habitat, the BLM and Forest Service would work cooperatively on	No similar action	The BLM and Forest Service would work cooperatively with permittees, lessees,

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		integrated ranch planning within sage-grouse habitat so operations with deeded BLM and/or Forest Service allotments can be planned as single units.		and other landowners to develop grazing management strategies on an allotment-by-allotment basis to improve sage-grouse habitat.
Livestock Grazing Permit Monitoring				
46	Casper RMP: Grazing leases would be adjusted where an evaluation of monitoring, field observations, or other data indicate changes, and either increases or decreases, in forage allocation are needed or when necessary or required by other applicable law or regulation. Kemmerer RMP: Vegetative communities would be managed in accordance with Wyoming Standards for Healthy Rangelands. Appropriate livestock grazing management actions would be developed and integrated to address rangeland health standards, improve forage for livestock, and enhance rangeland health. Newcastle RMP: Any adjustments in livestock grazing use would be made as a result of monitoring and consultation with grazing permittees. Monitoring studies would be conducted using the current BLM-approved methodology. Pinedale RMP: Monitoring of the range and the vegetation resource would be conducted at a level sufficient to detect changes in grazing use, trend, and range conditions. Monitoring would be tied to land health standards and indicators that help determine change in status and progress toward meeting objectives. Data would be	In addition to Alternative A: Measureable objectives would be monitored and grazing management would be evaluated to assure that management actions are achieving sage-grouse habitat objectives. When conducting land health assessments, indicators and measurements of structure, condition, and composition of vegetation specific to achieving sage-grouse habitat objectives would be included. If local/state seasonal habitat objectives are not available, sage-grouse habitat recommendations from Connelly et al. 2000b and Hagen et al. 2007 would be used Completion of land health assessments (Forest Service may use other analyses) and processing grazing permits within sage-grouse priority habitat areas would be prioritized. This process would focus on allotments that have the best opportunities for conserving, enhancing, or restoring habitat for sage-grouse. BLM and Forest Service ESDs (Forest Service may use other methods) would be utilized to conduct land health assessments to determine if standards of rangeland health are being met.	In addition to Alternative A: Measureable objectives would be monitored and grazing management would be evaluated to assure that management actions are achieving sage-grouse habitat objectives. Composition, function, and structure of native vegetation communities would be consistent with the reference state of the appropriate ESD and would provide for healthy, resilient, and recovering sage-grouse habitat components.	In addition to Alternative A: The BLM and Forest Service would continue to prioritize oversight and effectiveness monitoring of grazing activities to ensure compliance with permit conditions and that progress is being made on achieving Wyoming land health standards on BLM-administered lands.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	used to direct and support grazing management decisions consistent with national policy. Rawlins RMP: Livestock grazing would be managed to meet the Wyoming Standards for Healthy Rangelands. Green River RMP/JMH CAP: The kinds and seasons of livestock grazing use would continue to be licensed until monitoring, negotiation, consultation, or a change in resources conditions indicate that a modification is needed. Monitoring would be continued or initiated following adjustments in grazing use to assure that grazing and other management objectives are being met.			
47	No similar action	No similar action	In sage-grouse habitat, the BLM and Forest Service would ensure that soil cover and native herbaceous plants are at their ESD potential to help protect against invasive plants. In areas without ESDs, reference sites would be utilized to identify appropriate vegetation communities and soil cover.	No similar action
Permit Renewals				
48	TBNG LRMP: During the AMP process or as other opportunities arise, livestock grazing strategies would be designed and implemented to provide quality nesting cover in all sagebrush stands (>15% canopy cover of big sagebrush, silver sagebrush, and greasewood) within at least 3.0 miles of active display grounds (consistent with Geographic Area (GA) vegetation objectives) where sagebrush is irregularly distributed around the display ground. This minimum distance could be	If the LUP identifies specific allotment and/or permits where retirement is potentially beneficial, but the plan directs further site-specific analysis, a land use plan amendment would not be required to retire the permit as long as the site-specific analysis is consistent with the ROD.	Same as Alternative B	In addition to Alternative A: As the grazing permits are renewed, consider incorporating terms and conditions that address sage-grouse habitat objectives and management considerations in core and connectivity habitats.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	reduced to 2.0 miles where sagebrush is uniformly distributed around display grounds. MBNF LRMP: Livestock grazing on rangelands would be coordinated to provide adequate cover and forage for sage-grouse.			
49	Casper RMP: Conversions in kinds of livestock and changes in season of use would be considered on a case-by-case basis through an environmental analysis. Such changes will be consistent with rangeland health objectives. Grazing leases will be adjusted to accurately reflect the kind of livestock use on public land in all allotments. Kemmerer RMP: Current amounts, kinds, and seasons of livestock grazing uses would be authorized until rangeland health standards assessment results and (or) monitoring indicates a grazing use adjustment is necessary, or that a kind and (or) class of livestock or season of use modification can be accommodated. Newcastle RMP: Any adjustments in livestock grazing use would be made as a result of monitoring and consultation with grazing permittees. Monitoring studies would be conducted using the current BLM-approved methodology. Pinedale RMP: Conversions from one type of livestock to another would be evaluated on a case-by-case basis, including an environmental analysis, and would be authorized in	The BLM and Forest Service would implement management actions (grazing decisions, conservation plan development, or other agreements) to modify grazing management to meet seasonal sage-grouse habitat requirements. The BLM and Forest Service would consider singly, or in combination, changes in: 1. Season or timing of use 2. Numbers of livestock (includes temporary non-use or livestock removal) 3. Distribution of livestock use 4. Intensity of use (utilization or stubble height objectives) 5. Kind of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats) 6. Class of livestock (e.g., yearlings versus cow calf pairs) 7. When processing NEPA for grazing permit renewals, include at least one alternative that would implement a deferred or rest-rotation grazing system, if one is not already in place and the size of the allotment warrants it. The BLM and Forest Service would consider terms and conditions on grazing permits and leases that assure plant growth requirement are met and residual	No similar action	Same as Alternative B

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	conformance with the goals and objectives of the RMP. Rawlins RMP: The current amounts, kinds, and seasons of livestock grazing use would be authorized until monitoring, field observations, ecological site inventory, or other data acceptable to BLM indicates a grazing use adjustment is needed, as appropriate. Requests for changes in season-of use or kind-of-livestock would be considered on a case-by-case basis. Any decision regarding changes in grazing use would include cooperation, consultation, and coordination with the grazing permittees and the interested public. Green River RMP: The Wyoming Standards for Healthy Rangelands (BLM 1997a) would apply to all resource uses on BLM-administered lands. These standards are the minimal acceptable conditions that address the health, productivity, and sustainability of the rangeland. The standards describe healthy rangelands rather than rangeland by-products. Achievement of a standard is determined through observing, measuring, and monitoring appropriate indicators. An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity, and distribution) can be observed, measured, or monitored based on sound scientific principles. The standards will direct the management of public lands and focus the implementation of this activity plan toward the maintenance or attainment of healthy rangelands.	forage remains available for sage-grouse hiding cover.		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	TBNG LRMP: During the AMP process or as other opportunities arise, livestock grazing strategies would be designed and implemented to provide quality nesting cover in all sagebrush stands (>15% canopy cover of big sagebrush, silver sagebrush, and greasewood) within at least 3.0 miles of active display grounds (consistent with GA vegetation objectives) where sagebrush is irregularly distributed around the display ground. This minimum distance could be reduced to 2.0 miles where sagebrush is uniformly distributed around display grounds. BTNF LRMP: Fisheries, riparian habitats, and Threatened and Endangered Species (TES) species' needs would be addressed in allotment management plans. Range improvements, management activities, and trailing would be coordinated with and designed to help meet fish and wildlife needs, especially on key habitat such as crucial winter range, seasonal calving areas, riparian areas, sage-grouse leks, and nesting sites. Special emphasis would be placed on helping to meet the needs of TES species.			
50	When livestock grazing permits and/or grazing preference are voluntarily relinquished, the relinquishment of grazing preference would be managed according to appropriate BLM and Forest Service regulations.	Retirement of grazing privileges would be maintained as an option in sage-grouse priority habitat areas when the current permittee is willing to retire grazing on all or part of an allotment. The impacts of no livestock use on wildfire and invasive species threats	Same as Alternative B	In addition to Alternative A: Retirement of up to 15% within the individual planning unit would be authorized for grazing allotments in sage-grouse core and connectivity habitat areas, where the permittee or lessee voluntarily relinquishes their grazing preference in their grazing allotment.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		would be analyzed in evaluating retirement proposals. Retirement of grazing preference would be provided on a case by case basis when the advantage to sage-grouse habitat warrants, and a permittee or lessee voluntarily relinquishes their grazing preference in a specific grazing allotment or when a property is transferred. No temporary use would be allowed in allotments where grazing preference has been relinquished. If the LUP identifies specific allotment and/or permits where retirement is potentially beneficial, but the plan directs further site-specific analysis, a land use plan amendment would not be required to retire the permit as long as the site-specific analysis is consistent with the ROD.		Temporary use may be allowed in allotments where grazing preference has been relinquished or non-use warrants, to rest other allotments that include important sage-grouse habitat.
51	No similar action	Each planning effort would identify the specific allotment(s) where permanent retirement of grazing privileges is potentially beneficial to sage-grouse.	In each planning process, grazing allotments where permanent retirement of grazing privileges would be potentially beneficial to sage-grouse would be identified.	No similar action
52	Casper RMP: Other management considerations for use of SDW would include providing emergency use for relief from fire, drought, or other natural causes or to meet management objectives in adjoining allotments that require rest. These other uses would be addressed on a case-by-case basis and may occur any time during the year provided the AO has determined adequate forage is available and it does not interfere with regular trail use. The decision determining there is	In addition to Alternative A: During drought periods, evaluating effects of drought in sage-grouse priority habitat areas relative to their needs for food and cover would be prioritized. Since there is a lag in vegetation recovery following drought, the BLM and Forest Service would ensure that post-drought management allows for vegetation recovery that meets sage-grouse needs in priority habitat areas.	In addition to Alternative A: During drought periods, evaluating effects of drought in sage-grouse priority and general habitat areas relative to their biological needs would be prioritized, as well as drought effects on ungrazed reference areas. Since there is a lag in vegetation recovery following drought, the BLM and Forest Service would ensure that post-drought management allows for vegetation recovery that meets sage-grouse needs in sage-grouse habitat	In addition to Alternative A: When periods of drought occur within sage-grouse core or connectivity habitat, where appropriate, the season of use and stocking rate would be evaluated and adjusted through coordination with grazing permittee/lessee and annual billings processes.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	adequate forage would be documented and filed in the appropriate SDW file. Consultation and coordination with livestock owners who regularly use the respective SDW would be made prior to authorizing this type of use. This use would be authorized in accordance with federal grazing regulations. A drought contingency plan would be developed to maintain adequate habitat components for viable fish, wildlife, and Special Status Species populations. <u>BTNF LRMP:</u> Non-use for resource protection can be approved as a result of ongoing drought conditions. Requests by permittees to downsize or de-stock because of extreme or prolonged drought are in the interest of sound rangeland management, should be approved on a case-by-case allotment basis, and should not count against the permittee' s period of nonuse for personal convenience. <u>TBNG LRMP:</u> At the onset of drought, the need to adjust land uses to reduce impacts on sage-grouse nesting and brooding habitat would be evaluated.		areas based on sage-grouse habitat objectives.	
Range Development Projects				
53	<u>Casper RMP:</u> Identified hazard fences would be modified and new fences would be constructed in accordance with the BLM Fencing Handbook 1741-1. Decision 4010. Placement of salt, mineral, or forage supplements for livestock would not be allowed within 0.25 mile of water, wetlands, and riparian areas, unless	In addition to Alternative A: In priority habitat, any new structural range improvements and location of supplements (salt or protein blocks) would be designed to conserve, enhance, or restore sage-grouse habitat through an improved grazing management system relative to sage-grouse objectives. Structural range improvements, in this context, would include but would not be	In addition to Alternative A: All new structural range developments and location of supplements (salt or protein blocks) would be avoided in sage-grouse priority and general habitat unless independent peer-reviewed studies show that the range improvement structure or nutrient supplement placement benefits sage-grouse.	In addition to Alternative A: In sage-grouse general, core, and connectivity habitats, existing range improvements (e.g., fences, livestock/wildlife watering facilities) associated with grazing management operations would continue to be evaluated and modified when necessary for reducing impacts on Greater Sage-Grouse and its habitat.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	written analysis shows that watershed, riparian, wetland, wildlife, and vegetative values would not be adversely impacted. Forage supplements would be required to be "certified weed-free." Kemmerer RMP: BLM fencing standards would be applied to newly constructed fences on BLM-administered lands within the planning area. Existing fences would be eliminated or modified to reduce conflicts on a case-by-case basis. Livestock salt or mineral supplements would be located a minimum of 0.25 mile away from water sources, riparian areas, and aspen stands. Buffers would be based on resource concerns on a case-by-case basis. Newcastle RMP: Fence construction would be required to meet current BLM fence standards. Fences on BLM-administered public land surface that cause documented wildlife conflicts would be removed, reconstructed, or modified, as appropriate or necessary, to eliminate or reduce the conflict. Construction of fences that interfere with movements of big game species in crucial big game winter range would not be allowed on BLM-administered public land surface. Pinedale RMP: Mineral supplement blocks would be placed in locations that promote proper grazing distribution and prevent inappropriate livestock use on riparian habitat; for example, by locating	limited to: cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. When fences are necessary, in sage-grouse habitat a sage-grouse-safe design would be required. To reduce sage-grouse strikes and mortality fences in high risk areas would be removed, modified, or marked within sage-grouse habitat based on proximity to lek, lek size, and topography. In sage-grouse priority habitat, existing structural range improvements and location of supplements (salt or protein blocks) would be evaluated to make sure they conserve, enhance, or restore sage-grouse habitat.	Structural range developments, in this context, would include but would not be limited to cattle guards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments. Potential for invasive species establishment or increase following construction must be considered in the project planning process and monitored and treated post-construction. The comparative cost of changing grazing management instead of constructing additional range developments would be considered. Fences in areas of moderate or high risk of sage-grouse strikes would be removed, modified, or marked within sage-grouse habitat based on proximity to lek, lek size, and topography. In sage-grouse priority and general habitat, existing structural range improvements and location of supplements (salt or protein blocks) would be evaluated to make sure they conserve, enhance, or restore sage-grouse habitat.	

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	supplements on ridgetops and/or approximately 0.25 mile from riparian habitat. Placement of supplements near water sources, such as wells and reservoirs, would consider rangeland objectives, such as grazing distribution, wildlife habitat requirements, and reclamation success. Mineral supplement blocks would not be placed within 0.25 mile of an occupied sage-grouse lek. Mineral supplement blocks would not be placed within 0.25 mile of known Special Status Plant Species locations. Rawlins RMP: New fence construction would be authorized according to BLM standards unless modified following consultation with affected parties. Existing fences would be modified according to current BLM standards and according to wildlife and livestock management needs. Green River RMP/JMH CAP: Where documented wildlife conflicts with fencing on public lands occur, fences would be modified, reconstructed, or, if necessary, removed. Herding control of livestock would be encouraged as an alternative to fencing. Fence construction would be in accordance with BLM design standards and located so as not to overly impede wildlife movement. Consideration would also be given to Special Status Species and wild horse movement. Green River RMP: Livestock water developments and range improvements would be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species would be required. Water			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	developments and/or range improvements proposed in sensitive areas would be considered only if wildlife habitat and resource conditions are maintained or improved and no significant or irreversible adverse effects would occur. Salt or nutritional supplements would be prohibited within 500 feet of riparian habitat and National Historic and Scenic Trails unless analysis shows that these resources would not be adversely affected. These supplements also would be prohibited on areas inhabited by special status plant species. Placement of supplements at least 500 feet away from wells, troughs, and other human-made water sources would be encouraged to better distribute livestock. <u>JMH CAP:</u> Livestock water developments and range improvements would be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species would be required. Water developments and/or range improvements proposed in sensitive areas would be considered only if wildlife habitat and resource conditions were maintained or improved and no significant or irreversible adverse effects would occur. Salt or nutritional supplements would be prohibited within 500 feet of riparian habitat and National Historic and Scenic Trails unless analysis shows that these resources would not be adversely affected. These supplements also would be prohibited on areas inhabited by special status plant species. Placement of			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	supplements at least 500 feet away from wells, troughs, and other human-made water sources would be encouraged to better distribute livestock. TBNG LRMP: Any fences or water developments that are not contributing in achieving desired conditions would be prioritized for removal. When installing new livestock water tanks, durable and effective escape ramps for birds and small mammals would be installed. During maintenance of existing tanks, ramps that are ineffective or missing would be replaced. To help reduce disturbances to nesting sage-grouse, the following activities would be prohibited within 2.0 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., roads, water impoundments, oil and gas facilities), 2. Reclamation, 3. Gravel mining operations, 4. Drilling of water wells, Standard (Grassland Wide Direction) To reduce disturbances to nesting sage-grouse, the following activities would not be authorized within 2.0 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., pipelines, utilities, fencing), Guideline (Grassland Wide Direction) When constructing facilities or structures within 2 miles of a sage-grouse active display ground, they would be designed to discourage raptor perching by			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	maintaining a low profile or using perch inhibitors. BTNF LRMP: Fish; Wildlife; and Sensitive Species Standard - Range improvements, management activities, and trailing would be coordinated with and designed to help meet fish and wildlife needs, especially on key habitat such as crucial winter range, seasonal calving areas, riparian areas, sage-grouse leks, and nesting sites. Special emphasis would be placed on helping to meet the needs of TES species. Allotment Management Plan Standard - Fisheries; riparian habitats; and TES species' needs would be addressed in allotment management plans. Fish; Wildlife; and Sensitive Species Standard - Range improvements, management activities, and trailing would be coordinated with and designed to help meet fish and wildlife needs, especially on key habitat such as crucial winter range, seasonal calving areas, riparian areas, sage-grouse leks, and nesting sites. Special emphasis will be placed on helping to meet the needs of TES species. Form FS-2200-10b (Grazing Permit - Part 3) contains management practice requirements pertaining to livestock salting. Though none of the provisions found in recent permits directly address sage-grouse conservation measures, this section may be modified to stipulate such measures. MBNF LRMP: New disturbances such as construction, drilling, new recreation facilities, logging,			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	or other concentrated intense activities would be prohibited. Short-term projects designed to improve habitat such as prescribed burning are permitted. Sage-grouse breeding complexes: March 1 - June 30; 2 miles: Fence density would be limited by allowing new fences only to facilitate protection, public safety, or habitat protection or enhancement. Stock tanks and similar features would, in all cases, be kept out of the water influence zone if feasible and out of riparian areas and wetlands. Stock driveways would be kept out of the water influence zone except to cross at designated points. Water gaps would be hardened and stock crossing would be designated where needed and feasible. Salt and other supplements would be placed at least 0.25 mile from riparian areas and water developments unless specified otherwise in the allotment management plan or annual operating instructions.			
Livestock Trailing				
54	Casper RMP: The revocation of withdrawals for those trails that are no longer active would be reviewed and recommended and these lands would be incorporated into adjacent allotments (46,050 acres). Grazing leases would be offered to the respective grazing lessees. All remaining SDW lands for trail use (55,680 acres) would be retained. Kemmerer RMP: Current livestock trails would be retained. Livestock trailing use would occur within 0.5 mile of the mapped centerline. Pinedale RMP:	No similar action	In addition to Alternative A: Grazing and trailing would be avoided within lekking, nesting, brood-rearing, and winter habitats during periods of the year when these habitats are utilized by sage-grouse.	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Adequate stock trails would be maintained to support livestock trailing needs.			
	Riparian Area Management			
55	Casper RMP: Lotic and lentic wetland/riparian areas would be managed toward PFC. The BLM would manage toward PFC and identified DPC on 350 miles of lotic and adjacent riparian habitat and 10,000 acres of lentic habitat to meet fish, wildlife, and Special Status Species habitat requirements. Kemmerer RMP: Livestock conversions would be allowed in allotments with riparian concerns only when a plan is approved to address riparian issues. Management actions and range improvements proposed to address riparian issues would have to be implemented prior to authorizing the conversion. Livestock conversions may be approved only after completion of a suitability study for the conversion. The conversion may be authorized if it is determined that riparian habitats will be maintained or improved by the conversion. Pinedale RMP: Meet the Wyoming Standards for Rangeland Health and maintain or enhance wetland and riparian vegetation to achieve Proper Functioning Condition. Grazing systems will be designed to maintain or improve watershed and range condition; for example, through changing seasons of use, implementing rotational or other grazing management systems, or	In addition to Alternative A: Within sage-grouse priority habitat, where riparian areas and wet meadows meet proper functioning condition or meet standards using other similar methodology (Forest Service only), the BLM and Forest Service would strive to attain reference state vegetation relative to the ESD. Riparian areas and wet meadows would be managed for proper functioning condition or other similar methodology (Forest Service only) within sage-grouse priority habitats. Within priority and general sage-grouse habitats, wet meadows would be managed to maintain a component of perennial forbs with diverse species richness relative to site potential (e.g., reference state) to facilitate brood rearing. Also these wet meadow complexes would be conserved or enhanced to maintain or increase the amount of edge and cover within that edge to minimize elevated mortality during the late brood rearing period. Within sage-grouse priority habitat, hot season grazing on riparian and meadow complexes would be reduced to promote recovery or maintenance of appropriate vegetation and water quality. Fencing/herding techniques, seasonal use, or livestock distribution changes would be utilized to reduce pressure on riparian or wet meadow vegetation used	In addition to Alternative A: Within sage-grouse priority habitat, where riparian areas and wet meadows meet proper functioning condition or meet standards using other similar methodology (Forest Service only), the BLM and Forest Service would strive to attain reference state vegetation relative to the ESD. Riparian areas and wet meadows would be managed for proper functioning condition or other similar methodology (Forest Service only) within sage-grouse priority habitats. Within sage-grouse priority and general habitats, wet meadows would be managed to maintain a component of perennial forbs with diverse species richness and productivity relative to site potential (e.g., reference state) to facilitate brood rearing. At least 6 inches of stubble height must remain on all riparian/meadow area herbaceous species at all times. Also these wet meadow complexes would be conserved or enhanced to maintain or increase the amount of edge and cover within that edge to minimize elevated mortality during the late brood-rearing period.	In sage-grouse core and connectivity habitats, to address a proven threat to sage-grouse conservation, balancing grazing between riparian habitats and upland habitats would be considered to promote the production and availability of beneficial forbs to Greater Sage-Grouse in meadows, mesic habitats, and riparian pastures for Greater Sage-Grouse use during nesting and brood-rearing while maintaining upland conditions and functions. Through a full range of grazing management strategies for livestock, wildlife, and wild horses, changes to season-of-use in riparian/wetland areas before or after the hot growing season would be considered.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	developing infrastructure for livestock management. In allotments with riparian habitat, grazing management actions will be designed to maintain or achieve proper functioning condition. Green River RMP: Range improvements will be directed at resolving or reducing resource concerns, improvement of wetland/riparian areas, and overall improvement of vegetation/ground cover. New range improvements may be implemented in "I" and "M" category allotments. Maintenance of range improvements will be required in accordance with the BLM Rangeland Improvement Policy. JMH CAP: Implementation of grazing management systems will assist in improving or maintaining the desired range condition. Approved AMPs, or other activity plans intended to serve as the functional equivalent to an AMP, for each of the designated grazing allotments will provide the necessary guidance for achieving grazing management objectives. Appropriate actions for improving degraded rangeland and riparian habitat (i.e., meeting Wyoming Standards for Healthy Rangelands (BLM 1997a)) could include, but will not be limited to, reduction of permitted AUM, modified turnout dates, livestock water developments, range improvements, modified grazing periods, growing season rest, riparian pastures, exclosures, implementation of forage utilization levels, and livestock conversions. These improvements will be considered	by sage-grouse in the hot season (summer).		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	individually using the method outlined in Appendix 2 of the JMH CAP ROD to ensure conformance with management objectives for the planning area and other resource values. TBNG LRMP: During vegetation management practices, maintain or enhance wet and sub-irrigated meadows, seeps, riparian habitats, and other wetland areas that occur in or adjacent to sage-grouse habitat as quality sage-grouse foraging areas during the spring, summer, and fall. BTNF LRMP: Objective 4.3 - Protect and rehabilitate riparian areas to retain and improve their value for fisheries, aquatic habitat, wildlife, and water quality. MBNF LRMP: Manage livestock grazing in riparian areas and wetlands using "best management practices." The following Watershed Conservation Practices are interrelated and should be considered and implemented as a complete package where feasible: 1. Apply short duration grazing, as feasible (generally 20-30 days), to provide greater opportunity for regrowth and to avoid utilization of woody species. 2. Design grazing systems to limit utilization of woody species. Move livestock from riparian areas and wetlands when they begin to have a preference for woody species, especially plants in the young maturity classes.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	3. Keep stock tanks and similar features out of the water influence zone if feasible and out of riparian areas and wetlands always. 4. Keep stock driveways out of the water influence zone except to cross at designated points. Harden water gaps and designated stock crossing where needed and feasible.			
56	Green River RMP: Water sources may be developed in crucial wildlife winter ranges only when consistent with wildlife habitat needs. Such sources will be designed to benefit livestock, wild horses, and wildlife. Alternative water supplies or facilities for livestock may be provided to relieve livestock grazing pressure along stream bottoms and improve livestock distribution. JMH CAP: Livestock water developments and range improvements will be considered to maintain or improve resource conditions, enhance livestock distribution, or both. Compatibility with special status plant species will be required. Water developments and/or range improvements proposed in sensitive areas will be considered only if wildlife habitat and resource conditions are maintained or improved and no significant or irreversible adverse effects will occur. BTNF LRMP: Allotment Management Plan Standard - Fisheries; riparian habitats; and TES species' needs will be addressed in allotment management plans. MBNF LRMP:	In addition to Alternative A: Within sage-grouse priority habitats, new water developments for diversion from spring or seep source would be authorized only when priority sage-grouse habitat would benefit on both upland and riparian habitat from the development or when there are no negative impacts to sage-grouse. This would include developing new water sources for livestock as part of an AMP/conservation plan to improve sage-grouse habitat.	In addition to Alternative A: No new water developments for diversion from spring or seep sources would be authorized within sage-grouse priority and general habitats.	In addition to Alternative A: Within sage-grouse core and connectivity habitats, water developments would be authorized as needed to support grazing objectives.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Keep stock tanks and similar features out of the water influence zone if feasible and out of riparian areas and wetlands always.			
57	BTNF LRMP: Allotment Management Plan Standard - Fisheries; riparian habitats; and TES species' needs will be addressed in allotment management plans. Priority 1 validation monitoring of riparian areas: Conduct a level III riparian evaluation…and level II riparian evaluation on stocked allotments…with key riparian values to solve site specific problems and/or to assess impacts of management activities on riparian resources. Further evaluation or change in management required when riparian area management objectives are not met. TBNG LRMP: Manage livestock grazing to maintain or improve riparian/woody draw areas. Implement the following practices: Avoid season-long grazing and activities, such as feeding, salting, herding, or water developments, which concentrate livestock in riparian/woody draw areas. Control the timing, duration, and intensity of grazing in riparian areas to promote establishment and development of woody species.	In addition to Alternative A: Springs, seeps and associated pipelines would be analyzed to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within sage-grouse priority habitats. Modifications would be made where necessary, considering impacts to other water uses when such considerations are neutral or beneficial to sage-grouse.	In addition to Alternative A: Springs, seeps and associated water developments would be analyzed to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area within sage-grouse habitats. Modifications would be made where necessary, including dismantling water developments.	In addition to Alternative A: Existing water developments would be maintained or modified to support grazing objectives.
Minerals Management				
Exceptions to lease stipulations, Conditions of Approval, and terms and conditions				
58	Exceptions, waivers, and modifications to lease stipulations, COAs, and T&Cs, etc. for sage-grouse will continue to be	Exceptions, waivers, and modifications to lease stipulations, COAs, and T&Cs for sage-grouse would not be considered within sage-grouse priority habitat.	Exceptions, waivers, and modifications to lease stipulations, COAs, and T&Cs for sage-grouse would not be considered	Exceptions waivers, and modifications to lease stipulations, COAs, and T&Cs, etc., for sage-grouse would continue to be considered on a case-by-case basis consistent with approved LUPs and other

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	considered on a case-by-case basis consistent with approved LUPs. TBNG LRMP: Exceptions to lease stipulations, COAs, and T&Cs, etc. for sage-grouse will continue to be considered on a case-by-case basis consistent with approved stipulations in Appendix D of the TBNG LRMP. MBNF LRMP: Exceptions to lease stipulations, COAs, and T&Cs, etc. for sage-grouse will continue to be considered on a case-by-case basis consistent with approved stipulations in Appendix E of the MBNF LRMP.		within sage-grouse priority and general habitat.	BLM and Forest Service policy and regulations as they relate to exceptions within sage-grouse core, connectivity, and general habitat.
Fluid Minerals Unleased Estate				
59	No similar action	No similar action	Any oil, gas, or geothermal activity would be conducted to maximize avoidance of impacts, based on evolving scientific knowledge of impacts.	No similar action
60	Fluid mineral leasing would be allowed in sage-grouse core habitat areas, except in areas that are unavailable for leasing due to the need to protect other sensitive resources (Map 2-4).	Priority sage-grouse habitat areas would be closed to fluid mineral leasing (Map 2-5). An exception would be considered when there is an opportunity for the BLM and Forest Service to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens the priority area for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, offsite mitigation, etc., and avoid short-term losses that put the sage-	Sage-grouse priority and general habitat areas would be closed to fluid mineral leasing (Map 2-6). An exception would be considered when there is an opportunity for the BLM and Forest Service to influence conservation measures where surface and/or mineral ownership is not entirely federally owned (i.e., checkerboard ownership). In this case, a plan amendment may be developed that opens sage-grouse habitat for new leasing. The plan must demonstrate long-term population increases in the priority area through mitigation (prior to issuing the lease) including lease stipulations, and offsite mitigation, and avoid short-term losses that put the sage-grouse population at	The agencies would allow oil and gas leasing consistent and subject to the leasing stipulations analyzed in the timing, distance, disturbance, and density restrictions sections. In addition to Alternative A: Fluid mineral leasing would be closed in the following special management or higher sage-grouse core habitat areas (Map 2-7): 1. Newcastle RMP: Raven Creek (79,640 total acres) 2. Pinedale RMP: Beaver Ridge, Fontenelle Creek, and East Anticline (39,860 total acres).

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		grouse population at risk from stochastic events leading to extirpation.	risk from stochastic events leading to extirpation. Upon expiration or termination of existing leases, nominations/expressions of interest for parcels within sage-grouse priority and general habitat would not be accepted.	As existing fluid mineral leases expire in the areas listed above, they would not be re-offered for lease.
61	A minimum lease size would not be applied within sage-grouse core and connectivity habitat areas.	Same as Alternative A	Same as Alternative A	Same as Alternative A
62	Casper RMP: The blocks of public land identified as mapped in the Casper Field Office GIS database will be managed to retain intact blocks of native vegetation (192,550 acres, of which 131,880 acres are BLM-administered surface). In these areas, the following restrictions apply: 1. These blocks are (1) administratively unavailable for oil and gas leasing and (2) a geophysical operation on public surface for the life of the plan. Activities for existing oil and gas leases are managed intensively (see Appendix U of the Casper RMP). Existing leases will be allowed to expire and not be renewed. 2. Within these blocks, a withdrawal from the operation of the public land laws, including the mining laws will be pursued. 3. These blocks are closed to mineral material disposal. Existing permits will be allowed to expire without renewal or expansion. 4. These blocks are not open to wind/renewable energy development.	In addition to Alternative A: Geophysical exploration would be allowed within sage-grouse priority habitat areas to obtain exploratory information for areas outside of and adjacent to sage-grouse priority habitat areas. Geophysical operations would be allowed using only helicopter-portable drilling, wheeled or tracked vehicles on existing roads, or other approved methods conducted in accordance with seasonal timing limitations and other restrictions that may apply.	In addition to Alternative A: No new geophysical exploration permits would be issued within priority and general sage-grouse habitat. An exception to this for the purposes of recognizing valid existing rights would be the following: Geophysical exploration would be allowed within priority and general sage-grouse habitat areas to obtain exploratory information for areas outside of and adjacent to priority and general sage-grouse habitat areas. Geophysical operations would be allowed by only using helicopter-portable drilling methods and in accordance with seasonal timing restrictions and/or other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood rearing, and winter habitats during their season of use by sage-grouse.	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	5. These blocks remain open to livestock grazing. 6. All allowed surface-disturbing activities within the designated blocks are subject to a CSU restriction, minimizing surface disturbance to meet management objectives. Decision 4024 The North Platte River SRMA will continue to be open to oil and gas leasing and geophysical operations. Decision 7039 The area is administratively unavailable for oil and gas leasing and geophysical exploration is not allowed. Decision 7047 The MA is administratively unavailable for new oil and gas leasing. No geophysical operations will be allowed on public surface. Activities on existing leases will be managed intensively to meet the objectives of the MA (see Appendix U of the Casper RMP– Intensive Management). To minimize surface-disturbing activities, oil and gas exploration and development will use directional drilling techniques and well twinning whenever practicable. Decision 7059 The Red Wall/Gray Wall complex is located entirely within the South Bighorns/Red Wall MA and is administratively unavailable for new oil and gas leasing. No geophysical operations will be allowed on public surface. Activities on existing leases will be intensively managed to meet the objectives of the MA (see Appendix U of the Casper RMP– Intensive Management). To minimize surface-			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	disturbing activities, oil and gas exploration and development will use directional drilling techniques and well twinning whenever practicable. Decision 7063 Those lands currently open to oil and gas leasing will continue to be open to geophysical operations. Those lands open to oil and gas leasing, but subject to an NSO restriction, may be open to geophysical operations should site specific NEPA analysis disclose a finding of no significant impact. No geophysical operations are allowed in areas administratively unavailable for oil and gas leasing. Decision 2019 <u>Kemmerer RMP:</u> Allow for geophysical exploration on lands throughout the planning area subject to identified conditions of approval. <u>Newcastle RMP:</u> Surface-disturbing and disruptive activities associated with all types of minerals exploration and development and with geophysical exploration will be subject to appropriate mitigation measures determined through, but not limited to, use of the Wyoming BLM Mitigation Guidelines. <u>Pinedale RMP:</u> Vehicle-based geophysical activities will be assessed on a case-by-case basis. The use of surface and/or above-ground (Poulter shot) explosive charges for geophysical exploration will be assessed case by case. Geophysical projects, including projects proposed in areas with an NSO			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	restriction, will be analyzed and mitigation developed on a case-by-case basis. Geophysical activities that are considered casual use actions are allowed within 0.25 mile of active sage-grouse leks provided that: Operations are conducted on designated roads and trails. Operations during the breeding season (March 1 through May 15) are conducted between the hours of 8:00 a.m. and 8:00 p.m. A 150-foot wide strip of undisturbed sagebrush is maintained around the perimeter of the lek for hiding and escape cover. <u>Rawlins RMP:</u> All lands open to oil and gas leasing consideration will also be open to geophysical exploration, subject to appropriate resource surveys, surface protection measures, adequate bonding, and adherence to State of Wyoming standards for geophysical operations. Vehicular use for "necessary tasks" (as defined in the glossary), such as geophysical exploration including project survey and layout, will be permitted except where specifically prohibited (e.g., some SD/MAs). <u>Green River RMP:</u> Geophysical exploration (vehicles and detonation) activities will be prohibited within 0.5 mile of the Pinnacles Geologic Feature. Areas of sensitive heritage resources and geologic features, such as Boars Tusk, White Mountain Petroglyphs, special status plant species, WSAs, and historic trails, will remain closed. Receiver			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	lines may be laid using foot traffic within these areas. Exceptions to these restrictions may be granted on a case-by-case basis subject to appropriate site-specific analysis and mitigation requirements. The remainder of the planning area will be open to geophysical exploration, with application of appropriate mitigation. Rights-of-way limitations in the planning area apply to on- and off-road vehicle traffic used for geophysical activities. Exploration activities will be allowed in sensitive resource areas only if they can be performed with acceptable mitigation of impacts. <u>JMH CAP:</u> Geophysical exploration (vehicles and detonation) activities will be prohibited within 0.5 mile of the Pinnacles Geologic Feature. Areas of sensitive heritage resources and geologic features, such as Boars Tusk, White Mountain Petroglyphs, special status plant species, WSAs, and historic trails, will remain closed. Receiver lines may be laid using foot traffic within these areas. Exceptions to these restrictions may be granted on a case-by-case basis subject to appropriate site-specific analysis and mitigation requirements. The remainder of the planning area will be open to geophysical exploration, with application of appropriate mitigation. Rights-of-way limitations in the planning area apply to on- and off-road vehicle traffic used for geophysical activities. Exploration activities will be allowed in sensitive resource areas only if they can			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	be performed with acceptable mitigation of impacts. BTNF LRMP: Seismic Activity Standard - Helicopter-access seismic activity will be permitted. Seismic Activity Termination Guideline - Seismic activity may be seasonally restricted. TBNG LRMP: Where no suitable mitigation measures are possible, prohibit geophysical (seismic) operations that cause surface disturbance in Research Natural Areas (RNA), Special Interest Areas, American Indian traditional use area, and known National Register eligible sites. Minimize surface and other resource disturbance from geophysical operations. Do not allow new road construction, unless alternatives have been assessed and determined to be more environmentally damaging. MBNF LRMP: Where no effective mitigation measures are possible, prohibit geophysical (seismic) operations that cause surface disturbance in RNAs , Special Interest Areas, Recommended Wilderness, recommended Wild and Scenic Rivers, American Indian traditional use areas and known National Register sites. Minimize surface and other resource disturbance from geophysical operations.			
Fluid Minerals Leased Estate				
63	Kemmerer RMP:	In addition to Alternative A: In cases where federal oil and gas leases have been issued without adequate stipulations for the protection of sage-	In addition to Alternative A: In cases where federal oil and gas leases have been issued without adequate stipulations for the protection of sage-	In addition to Alternative A: The BLM and Forest Service would work with project proponents in these situations to promote measurable sage-

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Choose and implement appropriate mitigation in a timely manner to minimize decreases in habitat function. Utilize appropriate voluntary offsite compensatory mitigation to reduce impacts. This would be necessary if (1) all onsite mitigation has been accomplished and adverse effects have not been mitigated; or (2) if onsite mitigation is not feasible. Pinedale RMP: Offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as mitigation for proposed activities within the planning area. Proposed offsite mitigation will be described and analyzed for effectiveness in detail on a project-specific basis. Offsite mitigation would conform to requirements in the Pinedale RMP regarding the order of use of mitigation methods, stipulations applied to offsite mitigation measures, and priority order for mitigating resource impacts onsite or offsite. Green River RMP: Development actions will be analyzed on a case-by-case basis to identify mitigation needs to meet RMP objectives, provide for resource protection, and provide for logical development. Limitations on the amount, sequence, timing, or level of development may occur. This may result in transportation planning and in limitations in the number of roads and drill pads, or deferring development in some areas until other areas have been restored to previous uses. JMH CAP:	grouse or their habitats being provided in the applicable LUP decision, as revised or amended, their inclusion as permit COAs would be considered when approving exploration and development activities through completion of the environmental record of review (43 CFR 3162.5 and 36 CFR 228.108), including appropriate documentation of compliance with NEPA. Overall consideration would be given to minimizing the impact to sage-grouse through a project design that avoids, minimizes, reduces, rectifies, and/or adequately compensates for direct and indirect impacts to sage-grouse habitat or use and includes applicable and technically COAs. Selection and application of these measures would be based on current science and research on the effects to important breeding, nesting, brood-rearing, and wintering areas. For proposed operations in priority habitat areas, the Surface Use Plan of Operations (see 43CFR 3162.3-1(f)) would address, at a minimum, the anticipated noise, density and amount of disturbance, mechanical movement (e.g., pump jacks), permanent and temporary facilities, traffic, phases of development over time, offsite mitigation, and expected periods of use associated with the proposed project. Seasonal habitats or project features related to potential sage-grouse impacts that are not addressed in the Surface Use Plan of Operations based on site-specific or project-specific considerations shall be noted in the project file, along with a rationale for not including them.	grouse or their habitats being provided in the applicable LUP decision, as revised or amended, their inclusion as permit COAs would be considered when approving exploration and development activities through completion of the environmental record of review (43 CFR 3162.5 and 36 CFR 228.108), including appropriate documentation of compliance with NEPA. In this process, the following, among other things, would be evaluated: 1. Whether the conservation measure is "reasonable" (43 CFR § 3101.1-2) with the valid existing rights 2. Whether the action is in conformance with the approved RMP.	grouse conservation objectives such as, but not limited to, consolidation of project related infrastructure to reduce habitat fragmentation and loss and to promote effective conservation of seasonal habitats and connectivity areas that support population management objectives set by the state. The BLM and Forest Service would continue to work with project proponents and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats and resources whether inside or outside of sage-grouse core and connectivity habitat areas. Valid existing rights will be recognized and respected.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	COAs attached to an APD will be based on site-specific NEPA or other analysis and will establish specific, necessary mitigation measures not covered by stipulations for resource and environmental protection. Some areas will need more intensive mitigation measures to protect sensitive resources and provide for public health and safety. These intensive mitigation measures or COAs will mostly apply to areas with overlapping sensitive resources (e.g., Areas 2 and 3). Examples of intensive mitigation that can apply to all activities based on site-specific analysis include offsite placement of facilities, remote control monitoring, restricted or prohibited surface use including road construction, multiple wells from a single pad, central tank batteries/facilities, and pipelines and power lines concentrated in specific areas. In addition, refer to Section 3.12.3 for additional mitigation measures that may apply as part of the transportation plan.	In this process, the following, among other things, would be evaluated: 1. Whether the conservation measure is "reasonable" (43 CFR 3101.1-2) and consistent with valid existing rights 2. Whether the action is in conformance with the approved LUP; and the effectiveness of the proposed mitigation measures. BLM and Forest Service field offices/district offices would work with project proponents in these situations to promote measurable sage-grouse conservation objectives such as but not limited to consolidation of project related infrastructure to reduce habitat fragmentation and loss and to promote effective conservation of seasonal habitats and connectivity areas that support population management objectives set by the state. BLM and Forest Service would continue to work with project proponents and the WGFD to site their projects in locations that meet the purpose and need for their project, but have been determined to contain the least sensitive habitats and resources whether inside or outside of priority habitat areas. Valid existing rights would be recognized and respected.		
64	Field offices would work with project proponents (including those within BLM/Forest Service) to site their projects in locations that minimize impacts to sensitive resources.	In addition to Alternative A: If the lease is partially or entirely within priority habitat areas, subject to topographic and other environmental constraints, any development within priority habitat would be required to be placed in the area least harmful to sage-grouse based on vegetation, topography, or other habitat features.	No similar action	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
65	No similar action	In sage-grouse priority habitat, the following conservation measures would be provided as terms and conditions of the approved RMP: Do not allow new surface occupancy on federal leases within priority habitats, this includes winter concentration areas during any time of the year. Consider an exception: If the lease is entirely within priority habitats, apply a 4-mile NSO around the lek.	Same as Alternative B	No similar action
66	No similar action	To ensure comprehensive planning relative to sage-grouse conflicts, Master Development Plans would be completed during planning and review of projects involving multiple proposed disturbances within a lease or priority habitat area, without an exception for individual wildcat (exploratory) wells.	Same as Alternative B	Master development plans would not be required.
67	No similar action	Within sage-grouse priority habitat, unitization would be required when deemed necessary for proper development and operation of an area (with strong oversight and monitoring) to minimize adverse impacts to sage-grouse according to the Federal Lease Form, 3100-11, Sections 4 and 6.	Same as Alternative B	Within sage-grouse core and connectivity habitat, unitization for the orderly development of the mineral resource would be used.
68	The BLM and Forest Service should closely examine the applicability of categorical exclusions in sage-grouse core, connectivity, and general habitat. If extraordinary circumstances review is applicable, the BLM and Forest Service should determine whether those circumstances exist.	The BLM and Forest Service would closely examine the applicability of categorical exclusions in priority habitat. If extraordinary circumstances review is applicable, BLM and Forest Service should determine whether those circumstances exist.	Same as Alternative A	Same as Alternative A
69	Federal Regulations, 43 CFR 3104.1 requires that a bond be furnished before any drilling or surface disturbance activities begin. The lessee, sublessee or	For future actions, a full reclamation bond specific to the site would be required in accordance with 43 CFR 3104.2, 3104.3 and 3104.5, and 36 CFR 228.109. The	Same as Alternative B	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	the operator must furnish a surety or personal bond in the amount of at least $10,000 to ensure compliance with all the lease terms, including protection of the environment. With the consent of the surety and principal, the operator may use the bond of another party, such as the lessee. Each time there is a new operator, that operator must notify BLM and Forest Service that he/she is the responsible operator, giving the particulars of the bond under which he/she will operate. BLM and Forest Service can require an increase in a bond amount any time conditions warrant such an increase. Per 36 CFR 228.109, as part of the review of a proposed surface use plan of operations, the authorized forest officer shall consider the estimated cost to the Forest Service to reclaim those areas that would be disturbed by operations and to restore any lands or surface waters adversely affected by the lease operations after the abandonment or cessation of operations on the lease. If at any time prior to or during the conduct of operations, the authorized forest officer determines the financial instrument held by the Bureau of Land Management is not adequate to ensure complete and timely reclamation and restoration, the authorized forest officer shall give the operator the option of either increasing the financial instrument held by the Bureau of Land Management or filing a separate instrument with the Forest Service in the amount deemed adequate by the authorized forest officer to ensure reclamation and restoration. The authorized forest officer shall consider the costs of the operator's proposed	BLM and Forest Service would insure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000, Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. The reclamation costs would be based on the assumption that contractors for the BLM or Forest Service would perform the work.		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	reclamation program and the need for additional measures to be taken when estimating the cost to the Forest Service to reclaim the disturbed area.			
69a	No similar action	No similar action	No similar action	No similar action
70	Pinedale RMP: Produced water from CBNG wells will be treated and disposed of in collaboration and consistent with the requirements of the state.	No similar action	Prohibit the construction of evaporation or infiltration reservoirs to hold coalbed methane wastewater.	No similar action
71	Pinedale RMP: BLM-permitted actions on split estate lands are subject to the same stipulations as leased federal mineral estate on federal surface lands, provided the stipulations do not adversely affect the surface owner's land use or actions. Exceptions to surface development restrictions could be granted if requested or agreed to by the surface owner.	Where the federal government owns the mineral estate and the surface is non-federal ownership, the same conservation measures would be applied as those applied on public land.	Same as Alternative B	Same as Alternative A
72	MBNF LRMP: Negotiate surface management for private oil and gas minerals with the owner and operator to be as close as possible to the standards used for federal minerals.	Where the federal government owns the surface and the mineral estate is in non-federal ownership, appropriate BMPs would be applied to surface development.	Same as Alternative B	Same as Alternative A
73	No similar action	No similar action	Agencies would explore options to amend, cancel, or buy out leases in ACECs and sage-grouse priority and general habitat.	No similar action
74	No similar action	No similar action	Conditions that require relinquishment of leases/authorizations would be included if doing so would: (1) mitigate the impact of a proposed development, or (2) mitigate the unanticipated impacts of an approved development.	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
Solid Leasable Minerals				
75	Casper RMP: If coal development potential is shown to exist, all BLM-administered lands outside the CDPA will be considered for coal leasing, unless specifically closed to mineral leasing. The coal-screening process will be completed on all newly identified lands having coal development potential. All BLM-administered lands within the CDPA identified in the 2001 Buffalo RMP maintenance action are acceptable for further consideration for coal leasing. The only exceptions are those lands determined unacceptable within the area. The coal unsuitability criteria are re-evaluated whenever new coal lease applications are received. Kemmerer RMP: Process new coal lease applications by using the coal screening process. The coal screening process results will determine which lands may be available for further consideration for coal leasing and development. Appropriate NEPA analysis would be required prior to leasing. Federal land within the proposed Haystack project area is determined acceptable for further consideration for coal leasing and development. No coal Leases By Application (LBA) will be considered for Rock Creek/Tunp and Bear River Divide management areas. Pinedale RMP: Decisions on lands acceptable for leasing consideration for coal development will be made after an application is received and the coal screening process is conducted.	In addition to Alternative A: In sage-grouse priority habitat, find unsuitable all surface mining of coal under the criteria set forth in 43 CFR 3461.5. In general habitat, apply minimization of surface-disturbing or disrupting activities (including operations and maintenance) where needed to reduce the impacts of human activities on important seasonal sage-grouse habitats. Apply these measures during activity- level planning. Use additional, effective mitigation to offset impacts as appropriate (determined by local options/needs).	Same as Alternative B	In addition to Alternative A: Upon receipt of a coal lease application in sage-grouse core areas, 43 CFR 3461.5, Criterion 15 would be applied and the area would be identified as suitable for further coal leasing consideration after consultation with the state and where applicable, surface management agency, to determine that all or certain stipulated methods of coal mining will not have a significant long-term impact on the sage-grouse. Special conditions could be required as identified during the leasing process to protect sage-grouse resources.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Rawlins RMP: Federal coal lease applications will be accepted only on those federal coal lands with development potential identified as suitable for further leasing consideration after application of the coal unsuitability criteria (the above-mentioned approximately 51,250 acres and 2,318.7 million tons of surface minable federal coal). Green River RMP/JMH CAP: Federal coal lands within the Coal Occurrence and Development Potential area (about 422,000 acres) are open to further consideration for coal leasing and development (i.e., new competitive leasing, emergency leasing, lease modifications, and exchange proposals, under the Federal Coal Management Program) with appropriate and necessary conditions and requirements for protection of other land and resource values and uses. BTNF LRMP: Coal Leasing Standard - Coal leasing will be allowed. Strip mining will not be permitted unless no other mining options exist. Numerous areas closed to leasing of solid minerals.			
76	Casper RMP: If coal development potential is shown to exist, all BLM-administered lands outside the CDPA will be considered for coal leasing, unless specifically closed to mineral leasing. The coal-screening process will be completed on all newly identified lands having coal development potential.	In addition to Alternative A: No new underground mining leases would be granted unless all surface disturbances (appurtenant facilities) are placed outside of the sage-grouse priority habitat area. Where new appurtenant facilities associated with the existing lease cannot be located outside the sage-grouse priority habitat area, new facilities would	Same as Alternative B	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	All BLM-administered lands within the CDPA identified in the 2001 Buffalo RMP maintenance action are acceptable for further consideration for coal leasing. The only exceptions are those lands determined unacceptable within the area. The coal unsuitability criteria are re-evaluated whenever new coal lease applications are received. Kemmerer RMP: Process new coal lease applications by using the coal screening process. The coal screening process results will determine which lands may be available for further consideration for coal leasing and development. Appropriate NEPA analysis would be required prior to leasing. Federal land within the proposed Haystack project area is determined acceptable for further consideration for coal leasing and development. No coal LBAs will be considered for Rock Creek/Tunp and Bear River Divide management areas. Pinedale RMP: Decisions on lands acceptable for leasing consideration for coal development will be made after an application is received and the coal screening process is conducted. Rawlins RMP: Federal coal lease applications will be accepted only on those federal coal lands with development potential identified as suitable for further leasing consideration after application of the coal unsuitability criteria (the above-mentioned approximately 51,250 acres and 2,318.7 million tons of surface minable federal coal).	be co-located within existing disturbed areas. If this is not possible, any new appurtenant facilities would be constructed to the absolute minimum standard necessary. Where BLM and Forest Service identifies development of coal using underground mining methods, the BLM and Forest Service would consider the potential surface operations and surface impacts, and unsuitability Criterion No. 15 applies, the lands would be assessed as unsuitable unless the surface management agency finds that a relevant exception or exemption applies. See 43 CFR 3461.1(b).		

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Green River RMP/JMH CAP: Federal coal lands within the Coal Occurrence and Development Potential area (about 422,000 acres) are open to further consideration for coal leasing and development (i.e., new competitive leasing, emergency leasing, lease modifications, and exchange proposals, under the Federal Coal Management Program) with appropriate and necessary conditions and requirements for protection of other land and resource values and uses. BTNF LRMP: Coal Leasing Standard - Coal leasing will be allowed. Strip mining will not be permitted unless no other mining options exist. Numerous areas closed to leasing of solid minerals.			
77	Coal exploration activities are allowed in sage-grouse core and connectivity habitat with applicable stipulations.	Coal exploration activities would not be allowed in sage-grouse priority habitat.	No similar action	Same as Alternative A
Solid Leasable Minerals (Other than Coal and Oil Shale)				
78	Leasing of non-energy leasable minerals would be considered within sage-grouse core and connectivity habitat areas, except in areas that are unavailable for leasing due to the need to protect sensitive resources (Map 2-24). Kemmerer RMP: Sodium: All public lands (outside of the Raymond Mountain WSA and exceptions identified below) within the planning area are available for sodium leasing consideration. Exploration for sodium will be considered on a case-by-case basis. Limited surface occupancy criteria contained in the Sodium Mineral	Priority habitat would be closed to non-energy leasable mineral leasing. This would include not permitting any new leases to expand an existing mine (Map 2-25).	Same as Alternative B (Map 2-26)	In addition to Alternative A: Exploration licenses and prospecting permits would be considered with appropriate mitigating measures. All non-energy leasable mineral activities would be considered in sage-grouse core and connectivity habitats, provided that the activities can be completed in compliance to surface occupancy and disturbance and density stipulations (Map 2-27) analyzed through the DDCT process.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Development Environmental Assessment will be applied on a case-by-case basis. No new sodium leases or exploration licenses may be issued on lands within the Raymond Mountain WSA. No new sodium exploration and leasing will be considered for Rock Creek/Tunp and Bear River Divide management areas. Phosphate: All public lands (outside of the Raymond Mountain WSA and exceptions identified below) within the planning area are available for phosphate leasing consideration. Exploration for phosphate will be considered on a case-by-case basis. No new phosphate exploration and leasing will be considered for Rock Creek/Tunp and Bear River Divide management areas. <u>Pinedale RMP:</u> Should interest in other leasable minerals materialize in the future, leasing will be considered on a case-by-case basis, and the RMP will be amended as appropriate and necessary. The same surface disturbance restrictions will be used in analyzing leasing proposals and determining the issuance of any leases (for example, geothermal steam, coal, sodium, oil shale, and phosphate). <u>Green River RMP/JMH CAP:</u> The known sodium leasing area is open to exploration and consideration for leasing and developments, but is closed to prospecting permits. The remainder of the planning area is open to sodium prospecting except for areas that are closed to mineral leasing, surface mining, or mechanical prospecting type activities (areas closed			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	to drilling, off road vehicle use, and explosive charges). Sodium (trona) leasing will be considered on a case-by-case basis, and is subject to the same conditional requirements as oil and gas and coal, and the general management direction applied in this RMP.			
Locatable Mineral Activities				
79	Portions of sage-grouse core habitat are withdrawn from mineral entry for the protection of sensitive resources (Map 2-19).	In priority habitat, withdrawal from mineral entry would be proposed based on risk to the sage-grouse and its habitat from conflicting locatable mineral location and entry (Map 2-20). Existing [mining] claims would be made within the withdrawal area subject to validity exams or buy out. Claims that have been subsequently determined to be null and void in the recommended withdrawal would be included. In plans of operations required prior to any proposed surface disturbing activities, the following would be included: 1. Additional, effective mitigation in perpetuity for conservation (In accordance with existing policy, WO IM 2008-204). (Example: purchase private land and mineral rights or severed subsurface mineral rights within the priority area and deed to US Government). Seasonal restrictions would be considered if deemed effective.	Same as Alternative B (Map 2-21)	Same as Alternative A (Map 2-22)
Salable Minerals				
80	Sage-grouse core and connectivity habitat areas would be open to mineral material exploration, sales, and free use permits, except in areas that are	Sage-grouse priority habitat areas would be closed to mineral material exploration, sales, and free use permits subject to valid existing rights (Map 2-15).	Same as Alternative B (Map 2-16)	Same as Alternative A (Map 2-17)

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	unavailable due to the need to protect other resource values (Map 2-14).			
81	Salable mineral pits no longer in use will continue to be available for use for other resource uses.	In sage-grouse priority habitat, salable mineral pits no longer in use would be restored to meet sage-grouse habitat conservation objectives.	Same as Alternative B	Same as Alternative A
	Recreation and Visitor Services			
Outdoor Recreation Management				
82	Casper RMP: The entire planning area will remain open to dispersed recreation. The camping limit on public lands is set by BLM policy and is currently limited to 14 days. Emphasis will be placed on providing interpretive and information signs and materials for public land visitors, maintaining existing facilities to a high standard consistent with the recreational setting, and limiting development of additional facilities to those areas where public recreational use of surrounding public lands requires. Work with state, local groups, and adjacent landowners will be conducted to identify and develop recreational trails, both motorized and non-motorized, when the opportunities presents themselves. SRPs will be allowed for commercial, noncommercial, and competitive events on a case-by-case basis. Cooperation will be maintained with a variety of user groups, especially in the local area, to provide diverse recreational opportunities for enjoyment of public lands. BLM will pursue acquisition of lands and interest in lands in the Rattlesnake Range and Pine Ridge areas, as well as promote and support recreation-based tourism. Kemmerer RMP:	BLM SRPs and Forest Service RSUAs would only be allowed in priority habitat where they would have neutral or beneficial effects to priority habitat areas.	Same as Alternative B	In addition to Alternative A: BLM SRPs and Forest Service Recreation SUAs would be approved in sage-grouse core and connectivity habitat on a case by case basis consistent with other resource values.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Allow dispersed recreation and permit special recreational activities (e.g., outfitting and guiding permits and OHV events permitted on an annual basis after evaluation). Green River RMP: Special recreation permits will be considered on a case-by-case basis. Appropriate mitigation will be included in special recreation permits, commercial recreation uses, and major competitive recreation events to provide resource protection and public safety. JMH CAP: Special recreation use permits for managed activities that occur in the JMH CAP planning area will be reviewed and subject to recommendations made by the Rock Springs Field Office. This will allow the Rock Springs Field Office to track the amount, location, and timing of organized activity occurring within the planning area to monitor resource pressure. The permit evaluation process will consider the nature of the event, potential impacts to resources, conflicts with other events, and impacts to the quality of other visitors' experiences. Mitigation measures necessary to protect the resources will be included in any permit issued. A plan of operation will be required for all commercial recreational operators and outfitters. The plan will describe the type, extent, and location of the recreation use and the mechanisms by which the operator/outfitter will prevent impacts to environmental resources. Any requests in special recreation use permit applications to remove natural resources will be			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	evaluated on a case-by-case basis after an environmental analysis process. TBNG LRMP: To reduce disturbances to nesting sage-grouse, do not authorize the following activities within 2.0 miles of active display grounds from March 1 to June 15: Permitted recreation events involving large groups of people. Manage display ground viewing activities to reduce disturbances and adverse impacts to the birds on the display grounds.			
82a	No similar action	No similar action	No similar action	No similar action
83	No similar action	No similar action	Camping and other non-motorized recreation would be seasonally prohibited within 4 miles of active sage-grouse leks.	No similar action
Special Designations and Other Management Areas				
84	No similar action	All sage-grouse priority habitat areas would be designated as sage-grouse conservation ACECs/SIAs (Map 2-34).	All sage-grouse priority habitat areas and Audubon Important Bird Areas would be designated as sage-grouse conservation ACECs/SIAs (Map 2-35).	New sage-grouse conservation ACECs/SIAs would not be designated.
85	No similar action	No similar action	Large ACECs/SIAs would be designated to preserve, protect, conserve, restore, and sustain sage-grouse populations and the sagebrush ecosystem on which the sage-grouse relies.	No similar action
Travel Management				
86	The following areas would be managed as OHV "open" areas: 1. Casper Field Office: Poison Spider OHV Park (290 acres) 2. Rawlins Field Office: Dune Pond Cooperative Management Area (3,740 acres)	All OHV "open" areas within sage-grouse priority habitat areas would be designated as limited to designated roads and trails. These areas would include the following: 1. Casper Field Office: Poison Spider OHV Park (290 acres)	Same as Alternative B	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	3. Rock Springs Field Office: Portion of the Greater Sand Dunes Recreation Area (530 acres).	2. Rawlins Field Office: Dune Pond Cooperative Management Area (3,740 acres) 3. Rock Springs Field Office: Portion of the Greater Sand Dunes Recreation Area (530 acres). 4. The sand dune portions of these areas where roads do not exist would continue to be managed as OHV "open" areas.		
87	Limit motorized travel to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed.	Motorized travel would be limited to existing roads, primitive roads, and trails at a minimum, until such time as travel management planning is complete and routes are either designated or closed. Activity level travel plans would be completed within five years of the record of decision. During activity level planning, where appropriate, routes would be designated in priority habitat with current administrative/agency purpose or need to administrative access only.	Same as Alternative B	Same as Alternative A
88	<u>Casper Field Office:</u> Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks. Surface disturbing activity is restricted or prohibited within 0.75 miles of occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek. Occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek will have a 4-mile buffer. Within this buffer, surface disturbing activities will be avoided within 4 miles of occupied sage-grouse leks in areas with sagebrush stands greater than 10% canopy cover. Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting	No similar action	New road construction would be prohibited within 4 miles of active sage-grouse leks, and new road construction would be avoided in sage-grouse priority and general habitat.	New roads would be avoided within 0.25 miles of the perimeter of occupied sage-grouse leks within sage-grouse core and connectivity habitat areas.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (timing limitation stipulation (TLS)). Kemmerer Field Office: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied Greater Sage-Grouse leks. Newcastle Field Office: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter or occupied sage-grouse leks. Pinedale Field Office: Surface disturbing activities in Traditional Leasing Areas and Unavailable Areas are prohibited in suitable habitat within 0.25 mile of occupied leks. Rawlins Field Office: Surface disturbing activities or occupancy are prohibited on and within 0.25 mile of the perimeter of an occupied Greater Sage-Grouse lek. Green River RMP/JMH CAP: Active grouse leks (sage- and sharp-tail grouse) and the area within a 0.25 mile of the perimeter of active leks are avoidance areas for surface disturbing activities. Surface occupancy (long-term or permanent aboveground facilities) in the Jack Morrow Hills planning area will be prohibited within 0.25 mile of the perimeter of Greater Sage-Grouse leks unless adverse impacts can be mitigated. Distances will be subject to change on a case-by-case basis dependent on			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	applicable scientific research and site-specific analysis. TBNG LRMP: To help reduce adverse impacts to breeding sage-grouse and their display grounds, prohibit construction of new oil and gas facilities within 0.25 mile of active display grounds. A display ground is no longer considered active if it's known to have been unoccupied during the past 5 breeding seasons. This does not apply to pipelines and underground utilities. Roads are included in oil and gas facilities.			
89	Kemmerer RMP: Designated roads would not be upgraded. Any improvements to the roadways would require further analysis.	Within sage-grouse priority habitat, no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity would be allowed unless the upgrading would have minimal impact on sage-grouse in sage-grouse priority habitat, was necessary for motorist safety, or eliminated the need to construct a new road.	Within priority and general sage-grouse habitat, no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity would be allowed unless it was necessary for motorist safety or eliminated the need to construct a new road. Any impacts would be mitigated with methods that have been demonstrated to be effective to offset the loss of sage-grouse habitat.	Within sage-grouse core, connectivity, and general habitat, upgrading of existing routes would be allowed based on other resource uses.
90	No similar action	In priority habitat, existing roads or realignments as described above would be used to access valid existing rights that are not yet developed. If valid existing rights could not be accessed via existing roads, any new road would be constructed to the absolute minimum standard necessary, and the surface disturbance would be added to the total disturbance in the priority area. If that disturbance exceeds 3% for that area, additional, effective mitigation necessary would be evaluated or implemented to offset the resulting loss of sage-grouse habitat.	Within priority and general sage-grouse, route construction would be limited to realignments of existing designated routes if that realignment has a minimal impact on sage-grouse habitat, eliminates the need to construct a new road, or is necessary for motorist safety. Impacts would be mitigated with methods that have been demonstrated to be effective to offset the loss of sage-grouse habitat.	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
91	Kemmerer RMP: Roads and two-track routes determined to be unauthorized or redundant and unnecessary for resource management purposes will be reclaimed to achieve surrounding native conditions. Rawlins RMP: Roads or trails that are eroding beyond a reasonable level will be fixed or closed. JMH CAP: Transportation planning will provide for access to achieve multiple-use goals while providing maximum protection for crucial habitats and sensitive resources and will consider: Closing and rehabilitating unused roads and trails and those causing resource damage. This will be subject to county review of existing rights-of-way needs. BTNF LRMP: Minerals - Reclamation Standard - Disturbed area will be returned to near pre-construction conditions, unless changed conditions would benefit other resources.	In priority habitat, restoration of roads, primitive roads and trails not designated in travel management plans would be conducted. This would include primitive route/roads that were not designated in wilderness study areas and within lands with wilderness characteristics that had been selected for protections in previous RMPs.	Same as Alternative B	Within sage-grouse core, connectivity, and general habitat, natural deterioration of roads not designated in travel management plans would be allowed.
92	BTNF LRMP: Soil, Water, Air - Rehabilitation Standard: Rehabilitation seed mixes or other plantings will be designed for each vegetation community type that meets desired future condition.	Within sage-grouse priority habitats, when reseeding roads, primitive roads and trails, appropriate seed mixes (appropriate for sage-grouse ecological conditions) would be used and the use of transplanted sagebrush would be considered.	Within sage-grouse priority and general habitat, when reseeding closed roads, primitive roads and trails, appropriate native seed mixes and require the use of transplanted sagebrush would be used.	Within sage-grouse core, connectivity, and general habitat, natural reseeding would apply.
	Vegetation Management			
93	Casper RMP: Bates Hole and Fish Creek/Willow Creek: The areas will have priority for vegetative treatments to improve sage-grouse	In sage-grouse priority habitat, the BLM and Forest Service would manage for vegetation composition and structure consistent with ecological site potential	No similar action	Within sage-grouse core and connectivity habitat, the BLM and Forest Service would manage for vegetation composition

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	habitats and for vegetation monitoring to ensure residual herbaceous vegetation is maintained for nesting cover on public lands. TBNG LRMP: Pastures will be managed for sage-grouse/big sagebrush only if they contain sagebrush stands with 5% or more canopy cover of big sagebrush. During vegetation management projects, maintain or increase the size of big sagebrush patches in sage-grouse habitat. When conducting vegetation management projects, maintain small opening within big sagebrush stands at a maximum ratio of 1 acre of opening to 3 acres of shrub. Manage for high vegetative structure in areas where it would enhance sage-grouse nesting habitat. Emphasize areas characterized by: Presence of moderate to highly productive soils and range sites; Plant composition dominated by mid and/or tall grasses, with sagebrush canopy cover of 15 – 25%; Proximity to sage-grouse display grounds.	and within the reference state to achieve sage-grouse seasonal habitat objectives.		and structure that reflects desired plant community or comparable standard.
94	TBNG LRMP: In big sagebrush and sage-grouse wintering habitat, do not prescribe burn or treat with herbicides unless it can be demonstrated to be beneficial for local sage-grouse populations. Treatments should not be conducted where shrub canopy cover of sagebrush averages less than 15%. Limit treatments to less than 80-acre patches and no more than 20% of the sagebrush stands in the wintering habitat. Big sagebrush stands within 100	In priority habitat, fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems. Sagebrush canopy cover would not be reduced to less than 15% (Connelly et al. 2000, Hagen et al. 2007) unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of priority sage-grouse habitat and conserve habitat quality for the species. The benefits of the	Within priority and general sage-grouse habitat, sagebrush canopy cover would not be reduced to less than 15% unless a fuels management objective requires additional reduction in sagebrush cover to meet strategic protection of priority and general sage-grouse habitat and conserve habitat quality for the species. The benefits of the fuel break would be closely evaluated against the additional loss of sagebrush cover in the EA process.	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	yards of meadows, riparian areas, and other foraging habitats should not be burned or sprayed.	fuel break would be closely evaluated against the additional loss of sagebrush cover in future NEPA documents.		
95	Green River RMP: Prescribed burns generally will be conducted in areas having greater than 35% sagebrush composition, 20% desirable grass composition, and greater than 10 inches of precipitation. Other vegetation manipulation methods will be considered on a case-by-case basis depending on objectives and cost benefits. Casper RMP: Decision 4053: The areas (Bates Hole and Fish Creek/Willow Creek) will have priority for vegetative treatments to improve sage-grouse habitats and for vegetation monitoring to ensure residual herbaceous vegetation is maintained for nesting cover on public lands. MBNF LRMP: When managing vegetation, maintain existing, or move towards desired patch size, distribution, abundance, and/or edge-to-interior ratios, which are characteristic of natural disturbances (fire, insects, and diseases) representative of the cover types, measured at the Geographic Area scale.	In priority habitat, only treatments that conserve, enhance or restore sage-grouse habitat would be allowed (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve sage-grouse habitat).	In addition to Alternative A: Within sage-grouse priority and general habitat, the BLM and Forest Service would ensure that vegetation treatments create landscape patterns which most benefit sage-grouse. Only treatments that are demonstrated to benefit sage-grouse and retain sagebrush height and cover consistent with sage-grouse habitat objectives would be allowed (this includes treatments that benefit livestock as part of an AMP/Conservation Plan to improve sage-grouse habitat).	In addition to Alternative A: For vegetation treatments in sagebrush within core and connectivity habitat areas, refer to Appendix A, WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse (WGFD 2011, as updated). These recommended protocols would be used in determining whether proposed treatment constitutes a "disturbance" that will contribute toward the 9% threshold for habitat maintenance. Additionally, these protocols would be used to determine whether the proposed treatment configuration would be expected to have neutral or beneficial impacts for core populations or if they represent additional habitat loss or fragmentation. Treatments to enhance sagebrush/grasslands habitat for sage-grouse would be evaluated based upon habitat quality and the functionality/use of treated habitats post-treatment. The BLM and Forest Service would work collaboratively with partners at the state and local level to maintain and enhance sage-grouse habitats in a manner consistent with the core population area strategy for conservation.
96	Casper RMP: Bates Hole and Fish Creek/Willow Creek: As sage-grouse winter habitats are designated, a TLS will restrict activities from November 15 to March 14. Within the designated winter habitats, CSU for	Treatments would not be allowed in known sage-grouse winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and would maintain winter range habitat quality.	Fuels treatments would not be allowed in known sage-grouse winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and would maintain winter range habitat quality.	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	surface disturbing activities in sagebrush stands of greater than 20% canopy cover. TBNG LRMP: In big sagebrush and sage-grouse wintering habitat, do not prescribe burn or treat with herbicides unless it can be demonstrated to be beneficial for local sage-grouse populations. Treatments should not be conducted where shrub canopy cover of sagebrush averages less than 15%. Limit treatments to less than 80-acre patches and no more than 20% of the sagebrush stands in the wintering habitat. Big sagebrush within 100 yards of meadows, riparian areas, and other foraging habitats should not be burned or sprayed.			
97	Pinedale RMP: Treated areas will generally be rested from livestock grazing for a minimum of two full growing seasons after treatment unless the appropriate level of environmental analysis determines that shorter durations are adequate. Analysis could indicate a need for a longer rest period. Green River RMP: All treated areas will be rested a minimum of 2 growing seasons from livestock grazing. Burn areas will be fenced from livestock and big game animals if necessary. Prescribed fire will be restricted in areas with surface coal or other fossil fuel outcrops. JMH CAP: Areas proposed for treatment with prescribed burns will be rested 1 full year prior to treatment (unless vegetation cover prior to burning has adequate fine	Treated areas would be rested from grazing for two full growing seasons unless vegetation recovery dictates otherwise with no exceptions.	No similar action	Treated areas would not be rested from grazing.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	fuels to carry the fire) and 24 months after treatment, unless an onsite analysis determines that this time frame should be expanded or reduced. Treatments in aspen communities may be fenced on a case-by-case basis.			
98	No similar action	No similar action	Within sage-grouse priority and general habitat, sagebrush reduction/treatments to increase livestock or big game forage would be avoided and would include plans to restore high-quality habitat in areas with invasive species.	No similar action
Vegetation Reclamation				
99	Reclamation of surface disturbances in sage-grouse habitats would be in accordance with the Wyoming Reclamation Policy (BLM 2009a).	Same as Alternative A	Same as Alternative A	Same as Alternative A
100	No similar action	Within sage-grouse priority habitat: Areas for vegetation restoration and/or criteria that include state sage-grouse conservation plans and appropriate local information would be identified; use of native seeds for restoration would be required unless probability for success is low (non-native seeds could be used as long as they meet sage-grouse habitat objectives); restoration management would be designed to obtain long-term persistence. Reestablishment of sagebrush cover and desirable understory plants would be the highest priority for restoration efforts. Native plants and landscape patterns that most benefit sage-grouse would be restored and created, considering potential changes in climate.	Within sage-grouse priority and general habitat, exotic seedings would be rehabbed, interseeded, and restored to recover sagebrush in areas to expand sage-grouse priority and general habitats.	No similar action
101	No similar action	Within sage-grouse priority habitat, implementation of restoration projects	Within sage-grouse priority and general habitat, implementation of restoration	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		would be prioritized based on environmental variables that improve chances for project success in areas most likely to benefit sage-grouse. Restoration would be prioritized in seasonal habitats that are thought to be limiting sage-grouse distribution and/or abundance.	projects would be prioritized based on environmental variables that improve chances for project success in areas most likely to benefit sage-grouse. Restoration would be prioritized in seasonal habitats that are thought to be limiting sage-grouse distribution and/or abundance and where factors causing degradation have already been addressed (e.g., changes in livestock management).	
102	Kemmerer RMP: Require the use of certified weed-free seed and mulch for rehabilitation projects. Pinedale RMP: Disturbed areas will be reclaimed to native site plant composition. If reclamation of original plant composition is impossible or not desirable, reclamation will achieve a native plant community that meets the Wyoming Standards for Rangeland Health. TBNG LRMP: Allow only certified noxious weed seed-free products for animal feed or re-vegetation projects. This includes use of certified hay or straw, and heat-treated, or other appropriately processed products. Where technically and economically feasible, use genetically local (at the ecological sub-section level) native plant species in re-vegetation efforts. To prevent soil erosion, non-native annuals or sterile perennial species may be used while native perennials are becoming established. MBNF LRMP: Use native species and desirable non-native species in seed mixtures; if non-	Native seed allocation would be prioritized for use in sage-grouse habitat in years when preferred native seed is in short supply. This may require reallocation of native seed from ES&R, BLM, and/or BAER (Forest Service) projects outside of priority sage-grouse habitat to those inside it. Within sage-grouse priority habitat, the use of native plant seeds for ES&R or BAER seedings would be required based on availability, adaptation (site potential), and probability of success.	Same as Alternative B	In addition to Alternative A: Within sage-grouse core and connectivity habitat, use of native and non-native plant seeds for vegetation seedings would be allowed based on probability of success and benefits to sage-grouse habitats.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	natives are used to assure ground cover, select plants based on the likelihood that they will not persist beyond the rehabilitation period. Use genetically local (subsection level) plant species where technically and economically feasible.			
103	No similar action	Post ES&R and BAER management would be designed to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse, and travel management, etc., to achieve and maintain the desired condition of ES&R and BAER projects to benefit sage-grouse (Eiswerth and Shonkwiler 2006).	No similar action	No similar action
104	No similar action	The role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to priority sage-grouse habitats would be evaluated to determine if they should be restored to sagebrush or habitat of higher quality for sage-grouse. If these seedings are part of an AMP/Conservation Plan or if they provide value in conserving or enhancing the rest of the priority habitats, no restoration would be necessary. The compatibility of these seedings would be assessed for sage-grouse habitat or as a component of a grazing system during the land health assessments (or other analyses [Forest Service only]) (Davies et al. 2011).	Within sage-grouse priority and general habitat, the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to sage-grouse habitat would be evaluated to determine if they should be restored to sagebrush or habitat of higher quality for sage-grouse. If these seedings provide value in conserving or enhancing sage-grouse habitat, no restoration would be necessary. The compatibility of these seedings for sage-grouse habitat would be assessed during the land health assessments.	No similar action
105	No similar action	Priority would be given for implementing specific sage-grouse habitat restoration projects in annual grasslands first to sites that are adjacent to or surrounded by sage-grouse priority habitats. Annual grasslands would be second priority for	No similar action	Within sage-grouse core and general habitat, sage-grouse habitat restoration projects in annual grassland restoration would be prioritized commensurate with its threat to the region.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		restoration when the sites are not adjacent to priority habitat, but are within 2 miles of priority habitat. The third priority for annual grasslands habitat restoration projects would be sites beyond 2 miles of priority habitat. The intent would be to focus restoration outward from existing, intact habitat.		
106	No similar action	In fire prone areas where sagebrush seed is required for sage-grouse habitat restoration, the BLM and Forest Service would consider establishing seed harvest areas that are managed for seed production and are a priority for protection from outside disturbances.	Same as Alternative B.	No similar action
107	No similar action	No similar action	Any vegetation treatment plan would include pretreatment data on wildlife and habitat condition, establish non-grazing exclosures, and include long-term monitoring where treated areas are monitored for at least three years before grazing returns. Monitoring would be continued for five years after livestock are returned to the area, and compared to treated, ungrazed exclosures, as well as untreated areas.	No similar action
Grasshopper/Mormon Cricket Control and Management				
108	Casper RMP: Work with APHIS to control outbreaks of grasshoppers and Mormon crickets on public lands in the planning area in accordance with the MOU between U.S. Department of the Interior and APHIS.	Grasshopper or cricket control would not occur in sage-grouse priority habitat areas unless it can be demonstrated that it is beneficial to sage-grouse.	No similar action	Grasshopper or cricket control would occur to enhance economic benefits to other resource objectives.
Wild Horse Management				
109	Green River RMP/JMH CAP: Specific habitat objectives for herd management areas would be developed.	Within sage-grouse priority habitat, BLM HMAPs and Forest Service Wild Horse Territory Plans would be developed or amended to incorporate sage-grouse	Same as Alternative B	Wild horse populations would be managed at an appropriate management level, utilizing sage-grouse core habitat condition as one key parameter for

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Consideration will be given to desired plant communities, wildlife, watershed, livestock grazing, and other resource needs.	habitat objectives and management considerations for all BLM HMAs and Forest Service Wild Horse Territories (WHT).		setting these levels, where BLM HMAs and core habitat overlap.
110	No similar action	For all BLM HMAs and Forest Service WHTs within priority sage-grouse habitat, the evaluation of all AMLs would be prioritized based on indicators that address structure/condition/composition of vegetation and measurements specific to achieving sage-grouse habitat objectives.	No similar action	The evaluation of all AMLs in sage-grouse core and connectivity habitat would be prioritized based on sage-grouse habitat objectives.
111	No similar action	Within sage-grouse priority habitat, land health assessments would be prioritized and conducted to determine existing structure/condition/composition of vegetation within all BLM HMAs and Forest Service WHTs.	Same as Alternative B	Land health assessments would be prioritized and conducted in BLM HMAs within sage-grouse core and connectivity habitat areas.
112	<u>Green River RMP:</u> Water developments will be provided if necessary, to improve herd distribution and manage forage utilization. <u>JMH CAP:</u> Water developments will be provided if necessary, to improve herd distribution and manage forage utilization. Water developments within sensitive wildlife habitats will be considered only if wildlife habitat and resource conditions will be improved or maintained.	When conducting NEPA analysis for wild horse management activities, water developments or other rangeland improvements for wild horses in sage-grouse priority habitat, the direct and indirect effects to sage-grouse populations and habitat would be addressed. Water developments or rangeland improvements would be implemented using the criteria identified for domestic livestock identified above in priority habitats.	Same as Alternative B	No similar action
113	No similar action	The BLM and Forest Service would coordinate with other resources (Range, Wildlife, and Riparian) to conduct land health assessments to determine existing structure/condition/composition of vegetation within all BLM HMAs and Forest Service WHTs.	Same as Alternative B	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Wildfire and Fuels Management			
114	Casper RMP: Utilize an integrated management technique approach (defined as prescribed fire, mechanical, chemical, or biological, followed by desired reseeding) to reduce fuels to protect high priority areas or resource values defined as, but not limited to the following: 1. Urban and industrial interface areas 2. Developed recreation areas 3. Commercial timber areas 4. Wildlife habitats 5. Range-improvement facilities 6. Communication sites 7. Municipal watersheds.	In priority habitat, fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems.	Within sage-grouse priority and general habitat, fuels treatments would be designed and implemented with an emphasis on protecting existing sagebrush ecosystems.	No similar action
115	Kemmerer RMP: Implement BLM Emergency Stabilization and Rehabilitation standards located in the DOI Interagency Burned Area Emergency Response Guidebook and BLM Burned Area Emergency Stabilization and Rehabilitation Handbook on wildland fires to protect and sustain healthy ecosystems and protect life and property. Newcastle RMP: All wildfires will be evaluated to determine the need for rehabilitation or restoration measures. Restoration of burned areas will be by natural succession unless a special need is identified to prevent further resource damage. Rawlins RMP: Rehabilitation and restoration efforts specific to a fire event will be undertaken to protect and sustain ecosystems, public	Burned areas that are within priority sage-grouse habitats would be restored and recovered. The BLM and Forest Service would bring in BAER and BAR teams who would work collaboratively with partners at the federal, state, and local level to maintain and enhance sage-grouse habitats in a manner consistent with the priority habitat population area strategy for conservation. DDCT reviews would be conducted in coordination with the WGFD Habitat Protection Program located in Cheyenne, Wyoming, at the WGFD headquarters. Areas within sage-grouse priority habitat would be high priority for restoration of sage-grouse habitat beyond immediate response.	No similar action	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	health and safety, and to help communities protect infrastructure.			
116	Casper RMP: Use prescribed burning to achieve measurable 5th-order watershed objectives from (1) other resources, including, but not limited to, forestry, wildlife, range, vegetation, and watershed; (2) the reduction of hazardous fuels; and (3) the introduction of fire into fire-adapted ecosystems. Green River RMP/JMH CAP: Prescribed fire will generally be the preferred method of vegetation manipulation to convert decadent stands of brushland to grasslands and to stimulate sprouting of old, decadent aspen stands and/or shrub species. Prescribed burns are preferred in areas having greater than 35% sagebrush composition, 20% desirable grass composition, and greater than 10 inches of precipitation. Rawlins RMP: Fuel treatments, including prescribed fire, mechanical, chemical, and biological treatments will be used for fuels reduction and to meet other multiple-use resource objectives, including returning fire to its natural role in the ecosystem. WUI and communities at risk will receive priority for fuels reduction.	Within sage-grouse priority habitat, fire would not be used to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire that would disrupt fuel continuity or enhance land health could be considered where cheatgrass is a very minor component in the understory.	Within sage-grouse priority and general habitat, fire would not be used to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species). However, if as a last resort and after all other treatment opportunities have been explored and site specific variables allow, the use of prescribed fire for fuel breaks that would disrupt the fuel continuity across the landscape could be considered in stands where cheatgrass is a very minor component in the understory.	Same as Alternative A
117	No similar action	Within sage-grouse priority habitat, post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants. This could require temporary or long-term changes in livestock grazing management, wild horse management,	Within sage-grouse priority and general habitat, post fuels management projects would be designed to ensure long-term persistence of seeded or pre-treatment native plants, including sagebrush. This could require temporary or long-term changes in livestock grazing	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		travel management, or other activities to achieve and maintain the desired condition of the fuels management project.	management, wild horse management, travel management, or other activities to achieve and maintain the desired condition of the fuels management project.	
118	Casper RMP: Treat woodland encroachment in grassland, sagebrush, aspen, and other vegetative communities where it is determined to be detrimental to other resource values or uses. Manage 630,180 acres of sagebrush communities toward DPC.	No similar action	Within sage-grouse priority and general habitat, lands will be managed to be in the good or better ecological condition to help minimize adverse impacts of fire.	No similar action
119	Pinedale RMP: In the WUI or industrial interface, fuels reduction methods best suited to the area will be used to reduce the risk of catastrophic fire to these areas. Casper RMP: Use prescribed burning to achieve measurable 5th-order watershed objectives from (1) other resources, including, but not limited to, forestry, wildlife, range, vegetation, and watershed; (2) the reduction of hazardous fuels; and (3) the introduction of fire into fire-adapted ecosystems. Utilize an integrated management technique approach (defined as prescribed fire, mechanical, chemical, or biological, followed by desired reseeding) to reduce fuels to protect high priority areas or resource values defined as, but not limited to the following: 1. Urban and industrial interface areas 2. Developed recreation areas 3. Commercial timber areas	Same as Alternative A	Within sage-grouse priority and general habitat, any fuels treatments would focus on interfaces with human habitation or significant existing disturbances.	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	4. Wildlife habitats 5. Range-improvement facilities 6. Communication sites 7. Municipal watersheds. Decision 3008 Fuels Management <u>Rawlins RMP:</u> A high priority for fire management activities will be given to areas identified as communities at risk, industrial interface areas, and areas containing resource values considered high priority within the RMP planning area. <u>JMH CAP:</u> Appropriate management response to protect the basin big sagebrush/lemon scurfpea plant communities will be applied. Wildland and prescribed fires will be managed in all vegetation types to maintain or improve biological diversity and the overall health of the public lands. In particular, plant species and age class diversity will be a priority; thus, AMR for all wildland fires will be identified and implemented depending on the resources and management objectives for the area. Suppression techniques and hazardous fuels reduction activities will be identified to reduce wildland fire severity and occurrence on portions of the landscape where fire could cause undesirable changes in plant community composition and structure. A site-specific analysis will be prepared for sensitive resource areas, such as special status plant species sites, heritage sites, historic trails, and ACECs, to determine the type of fire suppression activity that will be acceptable. Fire equipment and fire suppression			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	techniques, such as vegetation clearing, will be limited to existing roads and trails in special status plant species habitat. As appropriate, the Fire Management Plan will be updated to reflect the appropriate suppression activity in sensitive resource areas.			
120	No similar action	No similar action	Within sage-grouse priority and general habitat, post fire recovery would include establishing adequately sized exclosures (free of livestock grazing) that could be used to assess recovery.	No similar action
121	No similar action	No similar action	Within sage-grouse priority and general habitat, livestock grazing should be excluded from burned areas until woody and herbaceous plants achieve sage-grouse habitat objectives.	No similar action
122	No similar action	No similar action	Within sage-grouse priority and general habitat where burned sage-grouse habitat cannot be fenced from other unburned habitat, the entire area (e.g., allotment/pasture) should be closed to grazing until recovered.	No similar action
123	No similar action	No similar action	Within sage-grouse priority and general habitat, mowing of grass would be used in any fuelbreak fuels reduction project (roadsides or other areas).	No similar action
124	Casper RMP: Appropriate management response will be used on all wildfires in the planning area. Full protection strategies and tactics will be used in the following areas: 1. WUI 2. Wildland industrial interface 3. Developed recreation sites 4. Developed electronics sites of all types.	In priority sage-grouse habitat areas, suppression would be prioritized immediately after firefighter and public safety to conserve the habitat. In general sage-grouse habitat, a high priority for suppression would be assigned where wildfires threaten priority sage-grouse habitat.	Same as Alternative B	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	In all other areas AMR strategies and tactics will be determined by (but not limited to) the following: 1. Firefighter and public safety 2. Resource values at risk 3. Proximity to private land 4. Firefighting resource availability. Tactical constraints follow: The use of retardant within 300 feet of surface water (standing or running) is prohibited. No trees are to be cut during suppression activities within 200 yards of an identified bald eagle roost. No heavy equipment will be used within the following areas, except when human safety is at risk: 1. Areas of cultural resource sensitivity 2. Riparian/wetland habitats 3. Big game crucial winter range habitats 4. Greater Sage-Grouse leks 5. Areas of highly erosive soils. In areas not identified as full protection, heavy equipment usage will be limited to existing roads and trails or immediately adjacent to them. <u>Kemmerer RMP:</u> In areas of high-density urban and (or) industrial interface with intermingled BLM-administered lands, suppression objectives will follow the AMR in an approved fire management plan for the planning area to provide first for human health and safety, while minimizing loss of property and threats to other surface owners. Generally, wildland fires are suppressed in these areas. In areas of			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	low-density urban and (or) industrial interface where BLM-administered lands occur in large contiguous blocks, fire suppression objectives will follow the AMR in an approved fire management plan for the planning area to provide first for human health and safety, while allowing for achievement of resource objectives. Newcastle RMP: Full suppression will be used on fires endangering human life or that spread to within 0.25 mile of state or private lands, structures and facilities, oil and gas fields, important riparian habitat, or other sensitive resources. All wildfires will be evaluated to determine the need for rehabilitation or restoration measures. Restoration of burned areas will be by natural succession unless a special need is identified to prevent further resource damage. Pinedale RMP: Wildland fire mitigation and fuels activities will be managed to provide for firefighter and public safety as a first priority. Public lands within intermixed landownership areas will be managed in association with the adjoining and nearby private and state lands. Areas of mixed landownership, communities at risk as identified in the Federal Register, Volume 66, Number 160, 2001 (Antelope Run, Beaver Creek area, Boulder, Cottonwood Creek, Daniel, Forty Rod, Hoback Ranches, New Fork, Pinedale, Pocket Creek, and Upper Green); urban and industrial interface areas; and areas containing high-priority resource values have high priority for			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	response to wildland fires and/or for fuels reduction and mitigation. Wildland fire suppression activities will be based on the AMR. Rawlins RMP: A high priority for fire management activities will be given to areas identified as communities at risk, industrial interface areas, and areas containing resource values considered high priority within the RMP planning area. Green River RMP: Wildfire suppression will emphasize AMR. Immediate control actions will be used only in cases of arson, direct threat to public safety, or a strong potential threaten structural property. Fire suppression actions will be based on achieving the most efficient control and allowing historical acres burned to increase. Activity plans will be developed for designated fire management areas defining specific parameters for all fire occurrences. JMH CAP: Appropriate management response to protect the basin big sagebrush/lemon scurfpea plant communities will be applied. Wildland and prescribed fires will be managed in all vegetation types to maintain or improve biological diversity and the overall health of the public lands. In particular, plant species and age class diversity will be a priority; thus, AMR for all wildland fires will be identified and implemented depending on the resources and management objectives for the area.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Suppression techniques and hazardous fuels reduction activities will be identified to reduce wildland fire severity and occurrence on portions of the landscape where fire could cause undesirable changes in plant community composition and structure. A site-specific analysis will be prepared for sensitive resource areas, such as special status plant species sites, heritage sites, historic trails, and ACECs, to determine the type of fire suppression activity that will be acceptable. Fire equipment and fire suppression techniques, such as vegetation clearing, will be limited to existing roads and trails in special status plant species habitat. As appropriate, the Fire Management Plan will be updated to reflect the appropriate suppression activity in sensitive resource areas. TBNG LRMP: Minimize impacts to paleontological and heritage resources, streams, stream banks, shorelines, lakes and associated vegetation, and habitat for threatened, endangered, proposed, and sensitive species from wildfire suppression efforts in the following ways: Prohibit the use of earth-moving equipment on known paleontological or heritage sites. Discourage the application of fire-retardant chemicals over riparian areas, wetlands, and open water. Prior to using earth-moving equipment, consult appropriate specialists for guidance. Notify USFWS when TES habitat is threatened or impacted by fire.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	BTNF LRMP: Wildland fire suppression standards LRMP fire amendment, page 9 Wildland fire suppression standards: A full range of suppression tactics is authorized forest-wide, consistent with forest-wide and individual Desired Future Condition (DFC) management emphasis and direction. Wildland fire use standard, page 10, LRMP fire amendment: Wildland fire use is authorized forest - wide, consistent with forest-wide and DFC emphasis and direction. The Fire Management Plan will designate areas of high resource values that will be protected during fire use. These sites include: 1. Administrative sites 2. Developed recreation sites 3. Summer homes 4. Communication sites 5. Oil and gas sites 6. Utility corridors 7. Other sites containing capital improvements. MBNF LRMP: When determining the appropriate fire management response, consider the following factors: a) proximity to other ownerships including all wildland-urban interfaces, b) values at risk such as suitable timber, structural improvements, and special interest areas, c) steep topography and motorized access to the area, d) protection of watersheds especially those that provide drinking water for local communities, e) concerns			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	related to wildlife habitat management, and f) other multiple use, ecosystem management, or agency policy objectives. Where fire suppression is necessary, use techniques that minimize soil and vegetation disturbance.			
Wildlife and Fisheries Habitat Management				
Monitoring Effectiveness				
125	Casper RMP: Bates Hole and Fish Creek/Willow Creek: The areas will have priority for vegetative treatments to improve sage-grouse habitats and for vegetation monitoring to ensure residual herbaceous vegetation is maintained for nesting cover on public lands.	Sage-grouse monitoring plans would be developed and implemented in coordination with the WGFD and partners, and sage-grouse habitats and populations would be monitored to assess the effectiveness of conservation measures that are applied in achieving the conservation of sage-grouse habitats. The directives contained in the LUP actions/decisions would be assessed to determine the effectiveness of their implementation. The BLM and Forest Service would establish monitoring protocols that would be incorporated into project approvals as necessary. The BLM and Forest Service would report annually to the BLM Wyoming State Director regarding sage-grouse monitoring data and the directives contained in the LUP actions/decisions.	No similar action	Same as Alternative B
Density and Disturbance				
126	No similar action	Priority sage-grouse habitats would be managed so that discrete anthropogenic disturbances cover less than 3% of the total sage-grouse habitat, regardless of ownership. Anthropogenic features would include but would not be limited to paved highways, graded gravel roads, transmission lines,	No similar action	Inside Greater Sage-Grouse core habitat areas, the density and disturbance goals would include the following: 1. The density of energy production (excluding coal and trona mining) and/or transmission structures (excluding buried pipelines or power

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, homes, and mines. In priority habitats where the 3% disturbance threshold is already exceeded from any source, no further anthropogenic disturbances would be permitted by the BLM or Forest Service until enough habitat has been restored to maintain the area under this threshold (subject to valid existing rights). In this instance, an additional objective would be designated for the priority area to prioritize and reclaim/restore anthropogenic disturbances so that 3% or less of the total priority habitat area is disturbed within 10 years.		lines) on the landscape would be managed. 2. An average of three energy production locations and/or transmission structures per 640 acres within the DDCT area would not be exceeded; and the combined value of existing and proposed disturbances within each DDCT would not exceed 9% loss of sagebrush habitat.
127	No similar action	Inside sage-grouse connectivity areas, the disturbance goals would include the following: 1. The existing level of density of disturbance would be managed on the landscape. 2. Three percent habitat disturbance (up to 19.2 acres) per 640 acres would not be exceeded using the DDCT process.	Same as Alternative B	Inside sage-grouse connectivity areas, the disturbance goals would include: 1. The density of energy production (excluding coal and trona mining) and/or transmission structures (excluding buried pipelines or power lines) would be managed on the landscape. 2. Nine percent habitat disturbance (up to 57.6 acres) per 640 acres would not be exceeded using the DDCT process.
Onsite and Offsite Mitigation				
128	Pinedale RMP: Offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as possible mitigation for proposed activities within the planning area. Proposed offsite mitigation will be described and analyzed for effectiveness	Within sage-grouse priority habitat when permitting APDs on existing leases that are not yet developed, the proposed surface disturbance would not exceed 3% per section for that area. When necessary, additional, effective mitigation would be conducted in (1) sage-grouse priority habitat areas, or less	Within sage-grouse priority habitat when permitting APDs on existing leases that are not yet developed, the proposed surface disturbance would exceed 3% per section for that area. An exception would be considered if additional, effective mitigation is	Within sage-grouse core and connectivity habitat when necessary, offsite mitigation would be conducted within the same population area where the impact occurs; and if that is not possible, mitigation would be conducted within the same Management Zone as the impact.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	in detail on a project-specific basis. Planning for offsite mitigation will be performed in coordination with local government agencies. The need for offsite mitigation will be determined in conformance with current BLM policy, as updated. The order of use of mitigation methods from most to least preferred is as follows: 1. Onsite mitigation directly resolving impacts created by the action. 2. Offsite mitigation to the resources affected by the action that cannot be resolved onsite. 3. Offsite mitigation to similar or related resources affected by the action that cannot be resolved onsite. The following stipulations apply to offsite mitigation measures: 1. Offsite mitigation will be used as a last choice when developing mitigation measures. 2. Offsite mitigation proposals will describe the replacement or substitution activities or methods that are used to address potential impacts on specific resources or environments or both. 3. Offsite mitigation must be as close to "in-kind" in replacement or substitution of resources, habitat function, or environments as practicable (e.g., elk habitat for elk habitat, historical properties for historical properties). 4. Offsite mitigation practices must last as long as the impacts are expected to occur.	preferably in (2) general sage-grouse habitat (dependent upon the area-specific ability to increase sage-grouse populations). Additional, effective mitigation would be conducted first within the same population area where the impact is realized; and if not possible, mitigation would be conducted within the same Management Zone as the impact, per 2006 WAFWA Strategy.	demonstrated to offset the resulting loss of sage-grouse. When necessary, additional, effective mitigation would be conducted in sage-grouse priority and general habitat (dependent upon the area-specific ability to increase sage-grouse populations). Additional, effective mitigation would be conducted first within the same population area where the impact is realized; and if not possible, mitigation would be conducted within the same Management Zone as the impact, per 2006 WAFWA Strategy.	An exception to the 9% limit would be considered if additional mitigation is demonstrated to be capable of offsetting the resultant loss to sage-grouse or their habitats.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	5. Offsite mitigation practices are to be developed, conducted or performed, and funded by the project proponent. 6. Offsite mitigation activities must be conducted subject to BLM review and approval that the mitigation will actually address the impacts occurring on the public lands. The priority order for mitigating resource impacts onsite or offsite is as follows: 1. Onsite Mitigation – Onsite (avoid, minimize, rectify, or reduce in time). 2. Offsite Mitigation – Local (unless greater resource benefits can be achieved through regional or interstate mitigation). 3. Offsite Mitigation – Regional (unless greater resource benefits can be achieved through interstate mitigation). 4. Offsite Mitigation – Interstate: The preferred area for conducting offsite mitigation is as near (local offsite mitigation) to the project or impacted area as possible or as scientific information and impact analysis suggests. 5. Offsite Mitigation – Interstate: The preferred area for conducting offsite mitigation is as near (local offsite mitigation) to the project or impacted area as possible or as scientific information and impact analysis suggests.			
Timing and Distance Restrictions				
129	**Sage-grouse leks inside sage-grouse core and connectivity habitat areas:** <u>Casper RMP:</u>	**Sage-grouse leks inside sage-grouse priority and connectivity habitat areas:** Provide the following conservation measures as terms and conditions of the	Same as Alternative B	**Sage-grouse leks inside core and connectivity habitat areas:** Surface occupancy or surface disturbing activities would be prohibited or restricted

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks. Surface disturbing activity is restricted or prohibited within 0.75 miles of occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek. Occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek will have a 4-mile buffer. Within this buffer, surface disturbing activities will be avoided within 4 miles of occupied sage-grouse leks in areas with sagebrush stands greater than 10% canopy cover (Map 2-1). Areas Outside of Bates Hole and Fish Creek/Willow Creek: Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (TLS). Kemmerer RMP: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied Greater Sage-Grouse leks (Map 2-1). Newcastle RMP: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter or occupied sage-grouse leks. Pinedale RMP: Surface disturbing activities in Traditional Leasing Areas and Unavailable Areas are prohibited in suitable habitat within 0.25 mile of occupied leks (Map 2-1). Rawlins RMP:	approved RMP: New surface occupancy would not be allowed on federal leases within priority habitats. This would include winter concentration areas during any time of the year. The following exceptions would be considered: 1. If the lease is entirely within priority habitats, a 4-mile NSO would be applied around the lek, and permitted disturbances would be limited to 1 per section with no more than 3% surface disturbance in that section. 2. If the entire lease is within the 4-mile lek perimeter, permitted disturbances would be limited to 1 per section with no more than 3% surface disturbance in that section.		on or within 0.25 mile radius of the perimeter of occupied sage-grouse leks (Map 2-2).

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Surface disturbing activities or occupancy are prohibited on and within 0.25 mile of the perimeter of an occupied Greater Sage-Grouse or lek (Map 2-1). Green River RMP: Active grouse leks (sage-grouse) and the area within a 0.25 mile of the perimeter of active leks are avoidance areas for surface disturbing activities. Surface occupancy (long-term or permanent aboveground facilities) in the Jack Morrow Hills planning area will be prohibited within 0.25 mile of the perimeter of Greater Sage-Grouse leks unless adverse impacts can be mitigated. Distances will be subject to change on a case-by-case basis dependent on applicable scientific research and site-specific analysis (Map 2-1). TBNG LRMP: To help reduce adverse impacts to breeding sage-grouse and their display grounds, prohibit construction of new oil and gas facilities within 0.25 mile of active display grounds. A display ground is no longer considered active if it's known to have been unoccupied during the past 5 breeding seasons. This does not apply to pipelines and underground utilities (Map 2-1). MBNF LRMP: Prohibit new disturbances such as construction, drilling, new recreation facilities, logging, or other concentrated intense activities. Short-term projects designed to improve habitat such as prescribed burning are permitted: sage-grouse breeding complexes March 1 through June 30, 2 miles.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
130	**Sage-grouse leks outside core and connectivity habitat areas:** Casper RMP: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks (Map 2-1). Surface disturbing activity is restricted or prohibited within 0.75 mile of occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek. Occupied sage-grouse leks in Bates Hole and Fish Creek/Willow Creek will have a 4-mile buffer. Within this buffer, surface disturbing activities will be avoided within 4 miles of occupied sage-grouse leks in areas with sagebrush stands greater than 10% canopy cover (Map 2-1). Areas Outside of Bates Hole and Fish Creek/Willow Creek: Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (TLS). Kemmerer RMP: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied Greater Sage-Grouse leks (Map 2-1). Newcastle RMP: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter or occupied sage-grouse leks (Map 2-1). Pinedale RMP: Surface disturbing activities inside Intensively Developed Fields will be	No similar action	No similar action	**Sage-grouse leks outside core and connectivity habitat areas:** Surface occupancy or surface disturbing activities would be restricted on or within a 0.25 mile radius of the perimeter of occupied sage-grouse leks (Map 2-2).

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	designed and implemented to minimize impacts on Greater Sage-Grouse habitats to the extent practicable. Surface disturbing activities in Traditional Leasing Areas and Unavailable Areas are prohibited in suitable habitat within 0.25 mile of occupied leks (Map 2-1). <u>Rawlins RMP:</u> Surface disturbing activities or occupancy are prohibited on and within 0.25 mile of the perimeter of an occupied Greater Sage-Grouse lek (Map 2-1). <u>Green River RMP:</u> Active grouse leks (sage-grouse) and the area within a 0.25 mile of the perimeter of active leks are avoidance areas for surface disturbing activities. Surface occupancy (long-term or permanent aboveground facilities) in the Jack Morrow Hills planning area will be prohibited within 0.25 mile of the perimeter of Greater Sage-Grouse leks unless adverse impacts can be mitigated. Distances will be subject to change on a case-by-case basis dependent on applicable scientific research and site-specific analysis (Map 2-1). <u>BTNF LRMP:</u> Not directly addressed; There are numerous areas that are leased that have No Surface Occupancy, Timing-Limitation, and/or Controlled-Surface-Use stipulations. Leases are issued with unique wildlife protection stipulations. Lessees are required to keep an absolute minimum number of access, tote roads, and other travelways necessary to conduct the lessee's operations, the location of which shall be designated by			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	[forest] supervisor prior to the time of their construction. Operations shall be conducted in a manner that will offer the least possible disturbance to wildlife on or adjacent to the leased land. MBNF LRMP: Prohibit new disturbances such as construction, drilling, new recreation facilities, logging, or other concentrated intense activities according to the following table. Short-term projects designed to improve habitat such as prescribed burning are permitted: sage-grouse breeding complexes March 1 through June 30, 2 miles. TBNG LRMP: To help reduce adverse impacts to breeding sage-grouse and their display grounds, prohibit construction of new oil and gas facilities within 0.25 mile of active display grounds. A display ground is no longer considered active if it's known to have been unoccupied during the past 5 breeding seasons. This does not apply to pipelines and underground utilities.			
131	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside core habitat areas:** Casper RMP: Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (TLS). Bates Hole and Fish Creek/Willow Creek: Occupied sage-grouse leks will have a ¾-mile CSU buffer to protect breeding	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside priority habitat areas:** A seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season would be applied in all sage-grouse priority habitat during this period.	**Sage-grouse breeding, nesting, and early brood-rearing habitat in priority and general habitat areas:** A seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season would be applied in all occupied sage-grouse habitat during this period. This seasonal restriction would also apply to related activities that are disruptive to sage-grouse, including vehicle traffic and other human presence.	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside core habitat areas:** Surface disturbing and/or disruptive activities would be prohibited or restricted from March 15-June 30. This restriction would be applied to all identified nesting and early brood-rearing habitats inside core habitat areas within 2 miles of the lek within sage-grouse core habitat areas.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	habitats. Human activity will be avoided between 8 p.m. and 8 a.m. from March 1 to May 15 (TLS) within this buffer. Leks, which are currently displayed as points, will be displayed as polygons. Occupied sage-grouse leks will have a 4-mile buffer. Within this buffer, surface development or wildlife-disturbing activities will be restricted March 15 through July 15 (TLS). Also, within this 4-mile buffer (CSU), surface disturbing activities will avoid sagebrush stands of greater than 10% canopy cover. Within this 4-mile buffer, mitigate for power poles and other high profile structures that may provide raptor perches. Avoid placement of these structures if possible, or install devices to preclude raptor perching on the structures. Areas Outside of Bates Hole and Fish Creek/Willow Creek: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks. Avoid human activity between 8 p.m. and 8 a.m. from March 1 to May 15 (TLS) within 0.25 mile of the perimeter of occupied sage-grouse leks. <u>Kemmerer RMP:</u> Avoid surface-disturbing and disruptive activities in suitable Greater Sage-Grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified Greater Sage-Grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 through July 15. <u>Newcastle RMP:</u> Avoid surface disturbing activities in suitable sage-grouse nesting and early			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	brood-rearing habitat within two miles of an occupied lek or in identified sage-grouse nesting and early brood-rearing habitat outside the two-mile buffer from March 15 through July 15. Pinedale RMP: Surface disturbing activities inside Traditional Leasing Areas and Unavailable Areas will be avoided in suitable nesting and early brood-rearing habitat within 2 miles of occupied Greater Sage-Grouse leks from March 15 to July 15. Rawlins RMP: Avoid surface disturbing and disruptive activities, geophysical surveys, and organized recreational activities (events) that require a SUP in suitable Greater Sage-Grouse nesting and early brood rearing habitat within 2 miles of the perimeter of an occupied Greater Sage-Grouse lek, or in identified Greater Sage-Grouse nesting and early brood rearing habitat, from March 1 to July 15. Green River RMP: To protect grouse nesting habitat, seasonal restrictions will apply within appropriate distances from the grouse lek. Appropriate distances (up to two miles) and time frames (usually from March 1 through July 15) will be determined on a case-by-case basis. Exceptions to seasonal restrictions may be granted, provided the criteria in can be met. No disruptive activities in the Jack Morrow Hills planning area are allowed in nesting and early brood-rearing habitats (March 15 to July 15). These limitations will be determined and applied on a case-by-			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	case basis. In addition, nesting and early brood-rearing habitats will be protected from habitat degradation, and measures will be taken to improve habitat quality. TBNG LRMP: To help reduce disturbances to nesting sage-grouse, prohibit the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., roads, water impoundments, oil and gas facilities) 2. Reclamation 3. Gravel mining operations 4. Drilling of water wells 5. Oil and gas drilling 6. Training of hunting dogs. To reduce disturbances to nesting sage-grouse, do not authorize the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., pipelines, utilities, fencing) 2. Seismic exploration 3. Workover operations for maintenance of oil and gas wells 4. Permitted recreation events involving large groups of people. When constructing facilities or structures within 2 miles of a sage-grouse active display ground, design them to discourage raptor perching by maintaining a low profile or using perch inhibitors. Manage display ground viewing activities to reduce disturbances and adverse impacts to the birds on the display grounds. BTNF LRMP: There are numerous areas that are leased that have No Surface Occupancy,			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Timing-Limitation, and/or Controlled-Surface-Use stipulations. Leases are issued with unique wildlife protection stipulations. Lessees are required to keep an absolute minimum number of access, tote roads, and other travelways necessary to conduct the lessee's operations, the location of which shall be designated by [forest] supervisor prior to the time of their construction. Operations shall be conducted in a manner that will offer the least possible disturbance to wildlife on or adjacent to the leased land. MBNF LRMP: Prohibit new disturbances such as construction, drilling, new recreation facilities, logging, or other concentrated intense activities according to the following table. Short-term projects designed to improve habitat such as prescribed burning are permitted: sage-grouse breeding complexes March 1 through June 30, 2 miles.			
132	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside connectivity habitat areas:** Casper RMP: Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (TLS). Bates Hole and Fish Creek/Willow Creek: Occupied sage-grouse leks will have a ¾-mile CSU buffer to protect breeding habitats. Human activity will be avoided between 8 p.m. and 8 a.m. from March 1	No similar action	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside connectivity habitat areas:** A seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season would be applied in all occupied sage-grouse habitat during this period. This seasonal restriction shall also to apply to related activities that are disruptive to sage-grouse, including vehicle traffic and other human presence.	**Sage-grouse breeding, nesting, and early brood-rearing habitat inside connectivity habitat areas:** Surface disturbing and/or disruptive activities would be prohibited or restricted from March 15-June 30. This restriction would be applied to all identified nesting and early brood-rearing habitats inside core habitat areas within 2 miles of the lek.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	to May 15 (TLS) within this buffer. Leks, which are currently displayed as points, will be displayed as polygons. Occupied sage-grouse leks will have a 4-mile buffer. Within this buffer, surface development or wildlife-disturbing activities will be restricted March 15 through July 15 (TLS). Also, within this 4-mile buffer (CSU), surface disturbing activities will avoid sagebrush stands of greater than 10% canopy cover. Within this 4-mile buffer, mitigate for power poles and other high profile structures that may provide raptor perches. Avoid placement of these structures if possible, or install devices to preclude raptor perching on the structures. Areas Outside of Bates Hole and Fish Creek/Willow Creek: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks. Avoid human activity between 8 p.m. and 8 a.m. from March 1 to May 15 (TLS) within 0.25 mile of the perimeter of occupied sage-grouse leks. Kemmerer RMP: Avoid surface-disturbing and disruptive activities in suitable Greater Sage-Grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified Greater Sage-Grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 through July 15. Newcastle RMP: Avoid surface disturbing activities in suitable sage-grouse nesting and early brood-rearing habitat within two miles of an occupied lek or in identified sage-			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	grouse nesting and early brood-rearing habitat outside the two-mile buffer from March 15 through July 15. Pinedale RMP: Surface disturbing activities inside Intensively Developed Fields will be designed and implemented to minimize impacts on Greater Sage-Grouse habitats to the extent practicable. Surface disturbing activities inside Traditional Leasing Areas and Unavailable Areas will be avoided in suitable nesting and early brood-rearing habitat within 2 miles of occupied Greater Sage-Grouse leks from March 15 to July 15. Rawlins RMP: Avoid surface disturbing and disruptive activities, geophysical surveys, and organized recreational activities (events) that require a SUP in suitable Greater Sage-Grouse and nesting and early brood rearing habitat within 2 miles of the perimeter of an occupied Greater Sage-Grouse lek, or in identified Greater Sage-Grouse nesting and early brood rearing habitat, from March 1 to July 15. Green River RMP: To protect grouse nesting habitat, seasonal restrictions will apply within appropriate distances from the grouse lek. Appropriate distances (up to two miles) and time frames (usually from March 1 through July 15) will be determined on a case-by-case basis. Exceptions to seasonal restrictions may be granted, provided the criteria in can be met.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	No disruptive activities in the Jack Morrow Hills planning area are allowed in nesting and early brood-rearing habitats (March 15 to July 15). These limitations will be determined and applied on a case-by-case basis. In addition, nesting and early brood-rearing habitats will be protected from habitat degradation, and measures will be taken to improve habitat quality. TBNG LRMP: To help reduce disturbances to nesting sage-grouse, prohibit the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., roads, water impoundments, oil and gas facilities) 2. Reclamation 3. Gravel mining operations 4. Drilling of water wells 5. Oil and gas drilling 6. Training of hunting dogs. To reduce disturbances to nesting sage-grouse, do not authorize the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., pipelines, utilities, fencing) 2. Seismic exploration 3. Workover operations for maintenance of oil and gas wells 4. Permitted recreation events involving large groups of people. When constructing facilities or structures within 2 miles of a sage-grouse active display ground, design them to discourage raptor perching by maintaining a low profile or using perch inhibitors. Manage display ground viewing activities to reduce disturbances and adverse			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	impacts to the birds on the display grounds. MBNF LRMP: Prohibit new disturbances such as construction, drilling, new recreation facilities, logging, or other concentrated intense activities according to the following table. Short-term projects designed to improve habitat such as prescribed burning are permitted: sage-grouse breeding complexes March 1 through June 30, 2 miles.			
133	**Sage-grouse breeding, nesting, and early brood-rearing habitat outside sage-grouse core and connectivity habitat areas:** Casper RMP: Avoid surface-disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 to July 15 (TLS). Bates Hole and Fish Creek/Willow Creek: Occupied sage-grouse leks will have a ¾-mile CSU buffer to protect breeding habitats. Human activity will be avoided between 8 p.m. and 8 a.m. from March 1 to May 15 (TLS) within this buffer. Leks, which are currently displayed as points, will be displayed as polygons. Occupied sage-grouse leks will have a 4-mile buffer. Within this buffer, surface development or wildlife-disturbing activities will be restricted March 15 through July 15 (TLS). Also, within this 4-mile buffer (CSU), surface disturbing activities will avoid sagebrush stands of	No similar action	**Sage-grouse breeding, nesting, and early brood-rearing habitat outside sage-grouse priority and connectivity habitat areas:** A seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and brood-rearing season would be applied in all occupied sage-grouse habitat during this period. This seasonal restriction would also apply to related activities that are disruptive to sage-grouse, including vehicle traffic and other human presence.	**Sage-grouse breeding, nesting, and early brood-rearing habitat outside sage-grouse core and connectivity habitat areas:** Surface disturbing and/or disruptive activities would be prohibited or restricted from March 15–June 30. This restriction would be applied to all identified nesting and early brood-rearing habitats outside core habitat areas within 2 miles of the lek.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	greater than 10% canopy cover. Within this 4-mile buffer, mitigate for power poles and other high profile structures that may provide raptor perches. Avoid placement of these structures if possible, or install devices to preclude raptor perching on the structures. Areas Outside of Bates Hole and Fish Creek/Willow Creek: Avoid surface disturbance or occupancy within 0.25 mile of the perimeter of occupied sage-grouse leks. Avoid human activity between 8 p.m. and 8 a.m. from March 1 to May 15 (TLS) within 0.25 mile of the perimeter of occupied sage-grouse leks. Kemmerer RMP: Avoid surface-disturbing and disruptive activities in suitable Greater Sage-Grouse nesting and early brood-rearing habitats within 2 miles of an occupied lek, or in identified Greater Sage-Grouse nesting and early brood-rearing habitats outside the 2-mile buffer from March 15 through July 15. Newcastle RMP: Avoid surface disturbing activities in suitable sage-grouse nesting and early brood-rearing habitat within two miles of an occupied lek or in identified sage-grouse nesting and early brood-rearing habitat outside the two-mile buffer from March 15 through July 15. Pinedale RMP: Surface disturbing activities inside Intensively Developed Fields will be designed and implemented to minimize impacts on Greater Sage-Grouse habitats to the extent practicable.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Surface disturbing activities inside Traditional Leasing Areas and Unavailable Areas will be avoided in suitable nesting and early brood-rearing habitat within 2 miles of occupied Greater Sage-Grouse leks from March 15 to July 15. Rawlins RMP: Avoid surface disturbing and disruptive activities, geophysical surveys, and organized recreational activities (events) that require a SUP in suitable Greater Sage-Grouse nesting and early brood rearing habitat within 2 miles of the perimeter of an occupied Greater Sage-Grouse lek, or in identified Greater Sage-Grouse nesting and early brood rearing habitat, from March 1 to July 15. Green River RMP: To protect grouse nesting habitat, seasonal restrictions will apply within appropriate distances from the grouse lek. Appropriate distances (up to two miles) and time frames (usually from March 1 through July 15) will be determined on a case-by-case basis. Exceptions to seasonal restrictions may be granted, provided the criteria in can be met. No disruptive activities in the Jack Morrow Hills planning area are allowed in nesting and early brood-rearing habitats (March 15 to July 15). These limitations will be determined and applied on a case-by-case basis. In addition, nesting and early brood-rearing habitats will be protected from habitat degradation, and measures will be taken to improve habitat quality. TBNG LRMP:			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	To help reduce disturbances to nesting sage-grouse, prohibit the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., roads, water impoundments, oil and gas facilities) 2. Reclamation 3. Gravel mining operations 4. Drilling of water wells 5. Oil and gas drilling 6. Training of hunting dogs. To reduce disturbances to nesting sage-grouse, do not authorize the following activities within 2 miles of active display grounds from March 1 to June 15: 1. Construction (e.g., pipelines, utilities, fencing) 2. Seismic exploration 3. Workover operations for maintenance of oil and gas wells 4. Permitted recreation events involving large groups of people. When constructing facilities or structures within 2 miles of a sage-grouse active display ground, design them to discourage raptor perching by maintaining a low profile or using perch inhibitors. Manage display ground viewing activities to reduce disturbances and adverse impacts to the birds on the display grounds. BTNF LRMP: There are numerous areas that are leased that have No Surface Occupancy, Timing-Limitation, and/or Controlled-Surface-Use stipulations. Leases are issued with unique wildlife protection stipulations. Lessees are required to keep an absolute minimum number of access, tote roads, and other travelways			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	necessary to conduct the lessee's operations, the location of which shall be designated by [forest] supervisor prior to the time of their construction. Operations shall be conducted in a manner that will offer the least possible disturbance to wildlife on or adjacent to the leased land. MBNF LRMP: Prohibit new disturbances such as construction, drilling, new recreation facilities, logging, or other concentrated intense activities according to the following table. Short-term projects designed to improve habitat such as prescribed burning are permitted: sage-grouse breeding complexes March 1 through June 30, 2 miles.			
134	**Sage-grouse winter concentration areas:** Casper RMP: As sage-grouse winter habitats are designated, a TLS will restrict activities from November 15 to March 14. Within the designated winter habitats, CSU for surface disturbing activities in sagebrush stands of greater than 20% canopy cover. Newcastle RMP: To protect important raptor and/or sage- and sharp-tailed grouse nesting habitat, activities or surface use will not be allowed from February 1 through July 31 within certain areas encompassed by the authorization. Surface disturbing and disruptive activities would be avoided in sage-grouse winter habitat from November 15 through March 14. Pinedale RMP:	**Sage-grouse winter concentration areas:** In priority habitat, the following conservation measures would be provided as terms and conditions of the approved RMP: New surface occupancy would not be allowed on federal leases within priority habitats during any time of the year.	Same as Alternative B	**Sage-grouse winter concentration areas:** Surface disturbing and/or disruptive activities in mapped sage-grouse winter concentration areas within sage-grouse core and connectivity habitat areas would be prohibited from November 15-March 14. Surface disturbing and/or disruptive activities in mapped sage-grouse winter concentration areas supporting connectivity populations would be prohibited from November 15-March 14.

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	All surface disturbing activities in Traditional Leasing Areas and Unavailable Areas are prohibited in Greater Sage-Grouse winter concentration areas from November 15 through March 15. Rawlins RMP: Surface disturbing and disruptive activities potentially disruptive to delineated Greater Sage-Grouse and sharp-tailed grouse winter concentration areas are prohibited during the period of November 15 to March 14 for the protection of Greater Sage-Grouse and sharp-tailed grouse winter concentration areas. Green River RMP: Seasonal restrictions for sage-grouse winter concentration areas may be identified on a case by case basis. Should additional seasonal restrictions be identified, exceptions would be handled on a case by case basis and include site specific analysis. Disruptive activities in the Jack Morrow Hills planning area will be prohibited in Greater Sage-Grouse winter concentration areas typically from November 15 to March 14. These areas and/or dates are subject to change based on new data and scientific information. BTNF LRMP: There are numerous areas that area leased that have No Surface Occupancy, Timing-Limitation, and/or Controlled-Surface-Use stipulations. Leases are issued with unique wildlife protection stipulations.			

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
Predation				
135	The BLM and Forest Service would support other agencies in their efforts to minimize impacts from predators. TBNG LRMP: Under a Memorandum of Understanding, the APHIS has primary responsibility for predator damage control on most National Forest System lands for actions initiated by APHIS. This includes responsibilities for ensuring compliance with the National Environmental Policy Act and the Endangered Species Act. To date, APHIS has completed and issued a Record of Decision and Final Environmental Impact Statement for their national animal damage control program and have also issued several statewide Decision Notices and Environmental Assessments for predator damage control. Forest Service responsibilities in predator damage control on National Forest System lands are primarily limited to ensuring that APHIS programs comply with direction in LRMPs for visitor and user safety, mitigation for sensitive wildlife species, and pesticide use.	No similar action	No similar action	In addition to Alternative A: The BLM and Forest Service would implement strategies and techniques in land management decisions that address predators shown to pose a threat to sage-grouse (Appendix F). The BLM and Forest Service would support and encourage other agencies in their efforts to minimize impacts from predators on sage-grouse where needs have been documented.
Noise				
136	Kemmerer RMP: Locate facilities or use BMPs to minimize impacts of continuous noise on species relying on aural cues for successful breeding. This requirement is based on current information, but may be subject to change in the future based upon new information. Pinedale RMP:	Noise would be limited to less than 10 decibels above ambient measures (20-24 dBA) at sunrise at the perimeter of a lek during active lek season.	Same as Alternative B	Same as Alternative A

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
	Noise generating activities in Traditional Leasing Areas and Unavailable Areas will be minimized through the application of BMPs, such as high-efficiency mufflers. TBNG LRMP: To help prevent reproductive failure, limit noise on sage-grouse display grounds from nearby facilities and activities to 49 decibels (10 dBA above background noise) from March 1 to June 15. Prohibit development or operations of facilities within 2 miles of a sage-grouse display ground if these activities would exceed a noise level of more than 10 decibels above the background noise level (39 dB), at 800 feet from the noise source, from March 1 to June 15. Limit noise levels from oil and gas production facilities within 0.25 mile of developed recreation sites to be no more than 70 decibels, as measured by the A-weighted Sound level (dBA) system of measurements, at the edge of the developed site. This standard applies only to constant, routine, day-to-day production noises. It doesn't apply to noise from drilling and testing of production nor temporary noises such as work-over rigs and maintenance or repair tasks. BTNF LRMP: Not directly addressed: Leases are issued with unique wildlife protection stipulations. Operations shall be conducted in a manner that will offer the least possible disturbance to wildlife on or adjacent to the leased land.			
Adaptive Management				
137	No similar action		No similar action	No similar action

#	Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D
		No similar action		
138	No similar action	No similar action	No similar action	No similar action

2.12 Alternatives Eliminated from Detailed Analysis

The following alternatives were considered but were not carried forward for detailed analysis because (1) they would not fulfill the requirements of FLPMA, NFMA or other existing laws or regulations; (2) they did not meet the purpose and need; (3) they were already part of an existing plan, policy, or administrative function; or (4) they did not fall within the limits of the planning criteria. FLPMA requires the BLM and Forest Service to manage the public lands and resources in accordance with the principles of multiple use and sustained yield.

2.12.1 Alternatives that Include Stipulations for Protection of Sage-Grouse Habitat from Oil Shale Resources

Comments were received during the public scoping process that suggested the BLM should either adopt the permitting processes guidelines and stipulations in the Wyoming EO 2011-05 or develop some other mitigation strategies for the protection of Sage-Grouse habitat from oil shale development. This is an issue that has been previously raised in the context of both the 2008 and the 2013 oil shale and tar sands planning initiatives. Both the 2008 and 2013 Oil Shale and Tar Sands Programmatic Environmental Impact Statements (PEIS) limit the scope of the decisions supported by the development of the PEIS to an allocation decision. (Please see Chapter 1 and Chapter 2, Section 2.5, page 2-80 of the Proposed LUP for Allocation of Oil Shale and Tar Sands Resources on Lands Administered by the Bureau of Land Management in Colorado, Utah, and Wyoming and Final Programmatic Environmental Impact Statement). This land use allocation does not authorize any future lease or development proposal. The current experimental state of the oil shale and tar sands industries does not allow the PEIS to include sufficient specific information or cumulative impact analyses to support future leasing decisions within these allocated lands. Accordingly, both the 2008 and 2013 Oil Shale and Tar Sands PEISs make clear that prior to any actual oil shale leasing, additional NEPA, and other applicable analyses will be required. Those analyses could result in decisions not to lease in specific areas or to lease in particular areas with stipulations, such as stipulations precluding surface disturbance.

If and when applications to lease oil shale resources are received and accepted by the Secretary, the BLM will conduct these additional required analyses, including consideration of direct, indirect, and cumulative effects, reasonable alternatives, and possible mitigation measures, as well as an assessment of the level of development that may be anticipated. On the basis of that analysis of future lease application(s), the BLM will establish general lease stipulations and best management practices and amend applicable land use plans, if necessary. BLM managers retain authority to approve, modify, or deny future lease and development proposals based on consideration of numerous factors, including, but not limited to, the specific technology proposed for use, the anticipated impacts on natural and cultural resources, economic viability, and community concerns. As part of the NEPA review process for any future oil shale lease, the BLM will consider the processes, guidelines, and stipulations detailed in EO 2011-05. After a lease is authorized, actual development will require additional analysis to address the site-specific conditions of the proposed development and to develop mitigating measures.

This lack of specific information regarding the specific technological requirements and environmental consequences that might be associated with the development of oil shale resources on the public lands also means that, with respect to this Greater Sage-Grouse planning effort, it would be premature for the BLM to consider specific protective stipulations. At this point, there is insufficient analytical basis for such consideration. For this reason, the BLM is not carrying forward for more detailed analysis in this EIS consideration of protective stipulations to be adopted for oil shale development.

2.12.2 Closure of Sage-Grouse Habitat to Off-Highway Vehicle Use

The BLM and Forest Service identified, but did not analyze in detail, an alternative to designate new area closures for off-highway vehicles within sage-grouse priority/core and general habitat areas. The following provides the rationale for why OHV area closures were eliminated from detailed study:

- There were no internal or external scoping comments submitted that suggested areas closures were an issue for detailed analysis during the public scoping period.
- Many of the BLM field offices that include sage-grouse priority/core and general habitat in the Great Basin and Rocky Mountain Regions have not initiated or completed route inventories; therefore, the BLM is not currently aware of the number of existing routes, or what the purpose of each of those routes may be. Without this detailed information, this large-scale programmatic EIS cannot propose area OHV closures because the analysis would be inconclusive. In addition, there is insufficient information to analyze the effects of these routes on Greater Sage-Grouse, resource allocations, uses, and the public.
- The appropriate planning level to evaluate closed OHV areas is during field office land use plan revisions or amendments, not for this multi-state programmatic plan amendment effort. During the field office plan revisions/amendments process, travel and transportation planning (areas open, closed and limited to OHVs) would be one of the key decisions being made for the local planning effort, and appropriate inventories would be conducted or local level information would be available in order to make site-specific decisions related to area closures. OHV decisions at the BLM field office/Forest Service district scale would take all resource conflicts and uses into consideration, not just sage-grouse. The massive scale of this programmatic EIS amendment is not conducive to providing detailed analysis concerning this decision.
- Field office plan revisions will take the initial "limited to existing roads" the sub-regional effort will likely identify, and step that down to RMP-level transportation planning during their revisions at a scale where the data is available to assess the nature of the designations and closures and multiple resource needs, not only sage-grouse.
- There are some OHV closures are already in place based on existing field office land use plans. Some of these closures intersect sage-grouse priority/core and general habitat areas and would remain constant under all alternatives in this EIS/amendment.
- Route inventories in sage-grouse priority/core and general habitat are currently underway based on coordinated efforts between the BLM and USFWS staff. Through these efforts, the agencies have determined where the greatest threats have been identified in Greater Sage-Grouse populations and thus a priority for inventory.
- Once the inventories are completed, the BLM will initiate travel and transportation management plans, which will be subject to a NEPA analysis and will include public involvement.
- USDA Forest Service, Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule – 36 CFR Parts 212, 251, 261, and 295, Effective December 9, 2005. The final rule will prohibit the use of motor vehicles off the designated system, as well as use of motor vehicles on routes and in areas that is not consistent with the designations. This rule also includes seasonal closures and motorized vehicle classifications. The Travel Rule defines a Designated Road as a National Forest System Road.

2.12.3 U.S. Fish and Wildlife Listing with Associated Conservation Measures

Reeommendations to analyze the effeets of a USFWS listing deeision were provided. Inadequacy of regulatory meehanisms was identified as one of the listing factors for Greater Sage-Grouse in the USFWS finding on the petition to list Greater Sage-Grouse. The USFWS identified the principal regulatory meehanism for the BLM and Forest Serviee as eonservation measures in land use plans. In response to the USFWS findings, as well as the BLM's and Forest Service's requirement to manage sensitive speeies, the BLM and Forest Service are preparing plan amendments with an assoeiated EIS to ineorporate eonservation measures in land use plans for Greater Sage-Grouse. Beeause the purpose of the plan amendments is to identify and ineorporate appropriate eonservation measures in land use plans to eonserve, enhanee and/or restore Greater Sage-Grouse habitat by reducing, eliminating, or minimizing threats to that habitat, the alternatives in this EIS, therefore, focus on those eonservation measures that ean be incorporated into the land use plans. Although the potential listing of Greater Sage-Grouse would also inelude eonservation measures identified by the USFWS, those eonservation measures are not known at this time. Therefore, an alternative that includes USFWS-listing with assoeiated eonservation measures for Greater Sage-Grouse was not analyzed in detail. Therefore a USFWS listing deeision is not analyzed in detail, beeause sueh an alternative would not meet the purpose and need, and therefore assoeiated analysis would be outside the scope of this EIS.

2.12.4 Designation of All Sage-grouse General Habitat as Areas of Critical Environmental Concern or Forest Service Special Interest Areas

The BLM and Forest Service identified, but did not analyze in detail, an alternative to designate all Greater Sage-Grouse general habitat (Map 3-18) as an ACEC or SIA. These areas did not meet the relevanee and importance eriteria necessary to be eonsidered for ACEC designation as determined by BLM regulation, nor did they meet designation criteria as determined by Forest Serviee regulation. However, the areas found to meet relevanee and importance criteria are analyzed in detail in Alternative B and Alternative C. The sage-grouse priority habitat areas met relevanee and importanee due to their size and proposed restrictions on oil and gas and wind energy development. Other sensitive resourees would benefit from this ACEC designation. The priority habitat areas also contain other sensitive wildlife habitats including big game erueial winter range, parturition habitats, and migration eorridors. The sage-steppe habitats in the proposed priority habitat area is the most intact stands of habitat remaining for sagebrush obligate speeies, many of which are considered BLM sensitive, such as the pygmy rabbit, brewer's sparrow, the loggerhead shrike, and the sage sparrow to name a few. There are also several areas of speeial status plant speeies within the sage-steppe core habitat areas. The fragmentation of much of the habitats outside of priority habitat in addition to continuous drought cycles have resulted in limitations and conflict for resourees in the remaining habitats, making the intaet priority habitats that mueh more important.

The sage-grouse general habitat areas did not meet the ACEC importance eriteria due to the eumulative buildup of anthropomorphic disturbances over time that has reduced habitat effectiveness to the point that the Greater Sage-Grouse has been identified as eligible for listing under the Endangered Species Act. The combination of disturbances industrial and agricultural in general habitats negates the benefits of the added proteetion needed in priority habitat and may inadvertently increase fragmentation of priority habitat, as the eomplexities of overlapping resource values and projects of national interest intersect. The general habitats within the project area in most eases have intensive mineral development and are held by production. The added value of managing the general habitat as an ACEC would not be fully realized due to the valid existing rights eneumbering these habitats, which is largely why these areas were not ineluded in the eore-area strategy by the State of Wyoming.

2.13 Summary Comparison of Environmental Consequences

Table 2-12, Summary Comparison of Environmental Consequences, presents a comparison summary of impacts from management actions proposed for the alternatives. Chapter 4 provides a more detailed impact analysis.

Table 2-12. Summary Comparison of Environmental Consequences

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
Air Quality				
NO_x emissions could increase by 8,172 tons per year in 2020. NO_x emissions could increase by 7,365 tons per year in 2031.	NO_x emissions could increase by 8,318 tons per year in 2020. NO_x emissions could increase by 4,430 tons per year in 2031.	NO_x emissions could increase by 4,696 tons per year in 2020. NO_x emissions could increase by 4,068 tons per year in 2031.	NO_x emissions could increase by 8,340 tons per year in 2020. NO_x emissions could increase by 7,061 tons per year in 2031.	NO_x emissions could increase by 7,667 tons per year in 2020. NO_x emissions could increase by 5,182 tons per year in 2031.
Cultural Resources				
Surface disturbance from oil and gas development, livestock grazing, recreation and travel management could potentially damage undiscovered or undocumented cultural sites. Under this alternative, 871,780 acres would be closed to oil and gas development, potentially decreasing impacts to cultural resources in these areas. Under this alternative, 285,930 acres would be managed as ROW exclusion areas and 424,820 acres would be closed to wind development, potentially decreasing impacts to cultural resources in these areas. Leasing of solid leasable minerals would be closed on 261,000 acres, potentially decreasing impacts to cultural resources in these areas.	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management could potentially damage undiscovered or undocumented cultural sites. An increase in the number of acres closed to oil and gas development (6,886,890 acres in Alternative B as compared to 871,780 acres in Alternative A) would potentially decrease disturbance, resulting in fewer impacts to cultural sites. Additional restrictions on other surface and sub-surface activities, such as ROW exclusion areas (5,271,440 acres) and areas closed to wind development (5,033,240 acres) would decrease the impacts to cultural	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management could potentially damage undiscovered or undocumented cultural sites. An increase in the number of acres closed to oil and gas development (16,878,220 acres in Alternative C as compared to 871,780 acres in Alternative A) would potentially decrease disturbance, resulting in fewer impacts to cultural sites. Additional restrictions on other surface and sub-surface activities, such as ROW exclusion areas (11,556,490 acres) and areas closed to wind development (11,531,340 acres) would decrease the impacts to cultural resources when compared with Alternative A.	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management could potentially damage undiscovered or undocumented cultural sites. An increase in the number of acres closed to oil and gas development (964,860 acres in Alternative D as compared to 871,780 acres in Alternative A) would potentially decrease disturbance, resulting in fewer impacts to cultural sites. Additional restrictions on other surface and sub-surface activities, such as ROW exclusion areas (5,230,110 acres) and areas closed to wind development (424,820 acres) would decrease the impacts to cultural resources when compared with Alternative A.	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management could potentially damage undiscovered or undocumented cultural sites. The number of acres closed to oil and gas development, 883,670 acres, would close more land to oil and gas development as compared to Alternative A. Additional restrictions on areas closed to wind development (425,080 acres) would decrease the impacts to cultural resources when compared with Alternative A. Impacts from ROW exclusion areas would be the same as those in Alternative A. Impacts from solid leasable minerals would be the same as those described in Alternative A, with the same amount of acres being closed (Map 2-28).

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
	resources when compared with Alternative A. An increase in the number of acres closed to solid leasable mineral development (6,922,690 acres as opposed to 234,230 acres under Alternative A) would protect cultural resources within these additional areas.	An increase in the number of acres closed to solid leasable mineral development (6,992,690 acres as opposed to 234,230 acres in Alternative A) would protect cultural resources within these additional areas.	Solid mineral leasing would be prohibited on 261,000 acres (Map 2-27), which is the same as Alternative A. Thus, impacts from solid mineral leasing would be similar to those described in Alternative A.	
Forestry				
Impacts to forestry and forestry resources would mostly occur from surface disturbing activities. Surface disturbing activities could reduce forest/woodland health through vegetation removal, soil compaction, soil removal, fractured vegetation communities, modified plant community structure and diversity, increased soil erosion, and increased surface runoff. This reduction in forest/woodland health could lead to an increase in invasive/noxious species establishment/proliferation and a reduction in timber production. The majority of surface disturbing activities within the planning area would be from minerals development and associated infrastructure, both of which typically are situated in non-forested to lightly forested areas.	Impacts to forestry from surface disturbing activities could be reduced compared to Alternative A, as short-term surface disturbances from fluid minerals development would be reduced to 104,050 acres and long-term surface disturbance acres to 33,540 acres. Surface disturbing impacts from oil, gas, and CBNG wells could be reduced compared to Alternative A, as the number of wells would be reduced to 11,555 oil and gas wells and 2,154 CBNG wells. These reductions could reduce the total acres developed for fluid minerals within forest/woodland habitat thus decreasing forestry/woodland vegetation, timber, and associated ecological processes which are	Impacts to forestry from surface disturbing activities could be reduced compared to Alternative A, as short-term surface disturbances from fluid minerals development would be reduced to 85,140 acres and long-term surface disturbances would be reduced to 27,030 acres. These disturbances would be reduced compared to Alternative A, as fluid mineral well development would be reduced to 9,533 oil and gas wells and 1,594 CBNG wells. The reduction in fluid mineral wells could reduce the total acres in forest/woodland habitat developed for fluid mineral activities which would maintain habitat functions and health as well as maintain timber production in these areas.	Impacts to forestry from surface disturbing activities would be the same as Alternative A, except the level of intensity would be reduced as the total short-term surface disturbance acres from fluid minerals development would be reduced to 122,910 acres and 37,720 long-term surface disturbance areas. This reduction in surface disturbance acres would help maintain ecological processes important to forest/woodland health and timber production. The reduction in impacts to forestry resources would mostly be due to the reduction of fluid mineral wells, with oil and gas wells being reduced to 13,083 wells and CBNG reduced to 2,686 wells. Reduction in wells could also reduce associated surface	Impacts from fluid mineral activities would be the same as Alternative A, except the level of intensity would be different as the projected well development would be reduced to 12,355 oil and gas wells and 2,462 CBNG wells. This reduction in wells would help maintain forest/woodland ecological functions and maintain timber production. Compared to Alternative A, surface disturbing activities from fluid minerals development would be reduced which would reduce short-term surface disturbance to 112,330 acres and long-term surface disturbances to 35,430 acres.

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
Minerals development and surface disturbing activities that do occur in woodland/forest areas are more likely to occur in areas that have high potential for CBNG. Surface disturbing impacts to forestry resources from fluid minerals development are expected to occur across 130,330 acres in the short-term and 39,050 acres in the long-term under Alternative A, most of which would be outside timber production and harvest areas.	important to overall forest health.		disturbances such as the construction of roads and utilities which could reduce forest/woodland vegetation removal compared to Alternative A.	
Lands and Realty				
Impacts on lands and realty management would result from placing restrictions on the location of ROWs and land tenure adjustments. Prohibiting or restricting surface disturbing activities and managing lands as ROW exclusion and avoidance areas could result in the relocation or redesign of proposed ROWs or could preclude the development of some ROWs that could not be effectively mitigated or located in other areas. Land use restrictions that result in the relocation or redesign of proposed ROWs would increase management efforts and costs related to proposals submitted by ROW applicants.	Impacts on lands and realty management would be similar to those identified under Alternative A, except the impacts would be more extensive with an increase in ROW exclusion and avoidance areas. ROW exclusion and avoidance areas would include 5,271,440 and 6,357,180 acres, respectively.	Impacts on lands and realty management would be similar to those identified under Alternative A, except the impacts would be more extensive with an increase in ROW exclusion areas. ROW exclusion and avoidance areas would include 11,556,490 and 0 acres, respectively.	Impacts on lands and realty management would be similar to those identified under Alternative A, except the impacts would be more extensive with an increase in ROW exclusion areas. ROW exclusion and avoidance areas would include 5,230,110 and 1,300,510 acres, respectively.	Impacts on lands and realty management would be similar to those identified under Alternative A, except the impacts would be more extensive with an increase in ROW avoidance areas and areas in which surface disturbing activities are prohibited. ROW exclusion and avoidance areas would include 285,930 and 6,208,990 acres, respectively.

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
ROW exclusion and avoidance areas would include 285,930 and 2,460,340 acres, respectively.				
Livestock Grazing				
Impacts to livestock grazing would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. The impacts would be greatest under this alternative because of fewer restrictions on newly permitted surface disturbing activities within the planning area. Managing 285,930 acres as ROW exclusion areas, 871,780 acres as unavailable for oil and gas leasing, 40,980 acres as NSO areas, and 68,550 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain forage resources, but to a lesser extent than the other alternatives. Grazing management would be adjusted on all allotments not meeting the Wyoming Standards for Healthy Rangelands on BLM-administered lands, and to those not meeting LRMP S&Gs on Forest Service-administered lands, for reasons attributable to	Impacts to livestock grazing would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. Managing 5,271,440 acres as ROW exclusion areas, 6,886,890 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to maintain forage resources. Allotments within sage-grouse priority habitat not meeting the Wyoming Standards for Healthy Rangelands due, in part, to livestock grazing would require a 20-30% forage allocation for livestock, thereby decreasing the forage available for grazing. In addition, retiring specific allotments and/or permits could occur and reduce the number of acres available for livestock grazing.	Impacts to livestock grazing would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. Managing 11,556,490 acres as ROW exclusion areas, 16,878,220 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas, would reduce surface disturbances and help to maintain forage resources. Because such restrictions are the most extensive under this alternative, impacts to livestock grazing associated with surface disturbances would be the least intensive. Livestock grazing would be entirely prohibited within sage-grouse priority habitat (approximately 5 million acres), thereby significantly reducing the number of acres available for livestock grazing.	Impacts to livestock grazing would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. Managing 5,230,110 acres as ROW exclusion areas and 964,860 acres as closed to oil and gas leasing would reduce surface disturbances and help to maintain forage resources. Grazing management would be adjusted on all allotments not meeting the Wyoming Standards for Healthy Rangelands on BLM-administered lands, and to those not meeting LRMP S&Gs on Forest Service-administered lands, for reasons attributable to grazing. These management restrictions could reduce AUM utilization and increase the cost of livestock operations.	Impacts to livestock grazing would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. Managing 285,930 acres as ROW exclusion areas, 883,670 acres as closed to oil and gas leasing, 441,690 acres as NSO areas, and 337,860 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain forage resources. Grazing management would be adjusted on all allotments not meeting the Wyoming Standards for Healthy Rangelands on BLM-administered lands, and to those not meeting LRMP S&Gs on Forest Service-administered lands, for reasons attributable to grazing. These management restrictions could reduce AUM utilization and increase the cost of livestock operations.

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
grazing. These management restrictions could reduce AUM utilization and increase the cost of livestock operations.				
Minerals and Energy				
Fluid Leasable Minerals				
Closing 871,780 acres and applying NSO on 40,980 acres and CSU on 5,015,210 acres within sage-grouse core and general habitat (Map 2-4) to fluid mineral development would restrict the area in which development could occur, would increase the complexity of mineral operations, slow down the production of fluid minerals, and ultimately reduce the number of mineral operations. Timing and distance limitations within sage-grouse core and general habitat would further shorten the season for mineral development and delay access to mineral resources. Under Alternative A, there would be 13,653 wells projected over the life of the plan.	Closing 6,886,890 acres within sage-grouse priority habitat to fluid mineral development and applying NSO stipulations, as COAs, to valid existing leases on 2,082,140 acres (Map 2-5) would decrease the number of mineral operations compared to Alternative A. Timing and distance limitations would be increased to include a 4-mile NSO buffer around leks with a cap on surface disturbance of 1 disturbance per section and no more than 3% total surface disturbance, which would further reduce and limit mineral activity compared to Alternative A. Under Alternative B, the impacts above would reduce the number of wells projected over the life of the plan to 11,555.	Closing all 16,878,220 acres of sage-grouse priority and general habitat to fluid mineral development and applying NSO stipulations, as COAs, to valid existing leases on 2,082,140 acres (Map 2-6) would decrease the number of mineral operations compared to Alternative A. Timing and distance limitations would be similar to Alternative B, but would include disruptive activities as well, which would further reduce and limit mineral activity compared to Alternative A. Under Alternative C, the impacts above would reduce the number of wells projected over the life of the plan to 9,533.	Closing 964,860 acres within sage-grouse core and general habitat to fluid mineral development and applying CSU on 2,117,990 acres within sage-grouse core and general habitat (Map 2-7) would decrease the number of mineral operations compared to Alternative A. Timing and density limitations of 3 locations per 640 acres and a 9% disturbance cap would reduce and limit mineral development compared to Alternative A. Under Alternative D, the impacts above would reduce the number of wells projected over the life of the plan to 13,083.	Closing 883,670 acres and applying NSO on 441,690 acres and CSU on 6,438,480 acres within PHMAs and GHMAs (Map 2-8) to fluid mineral development would decrease the number of mineral operations compared to Alternative A. Timing and distance limitations would be increased to include prohibiting surface occupancy and disruptive activities within 0.6 miles of occupied leks and density limitations of 1 location per 640 acres and a 5% disturbance cap would reduce and limit mineral activity compared to Alternative A. Under the Proposed LUP Amendments, the impacts above would reduce the number of wells projected over the life of the plan to 12,355.
Solid Leasable Minerals				
Consideration of solid mineral leasing in most of the planning	Closing sage-grouse priority areas to coal exploration would decrease the area	Impacts would be the same as under Alternative B (Map 2-26).	Impacts would be the same as under Alternative A (Map 2-27).	Impacts would be the same as under Alternative A. except 483,420 acres would

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
area would allow for the development of coal. Consideration of non-energy leasable minerals would allow for the development of sodium (trona), phosphates, and tar sands. Approximately 261,000 acres would be closed to solid mineral leasing, which would eliminate this type of mineral development over 3% of sage-grouse core and general habitat (Map 2-24).	available for future development of coal compared to Alternative A. Closing sage-grouse priority areas to non-energy leasable minerals would reduce the amount of area available for mineral development. Approximately 6,992,690 acres would be closed to solid mineral leasing, which would eliminate this type of mineral development over 43% of sage-grouse priority and general habitat (Map 2-25).			be closed to solid mineral leasing (Map 2-28).
Locatable Minerals				
Withdrawing or pursuing withdrawal on approximately 131,070 acres from mineral entry would restrict the ability to develop locatable minerals in those areas (Map 2-19).	Withdrawing or pursuing withdrawal on all priority sage-grouse habitat (approximately 5,118,070 acres) from mineral entry would restrict the ability to develop locatable minerals on more areas than Alternative A (Map 2-20).	Impacts would be the same as under Alternative B (Map 2-21).	Impacts would be the same as under Alternative A (Map 2-22).	Impacts would be the same as under Alternative A, except 252,070 acres would be pursued for withdrawal (Map 2-23).
Salable Minerals				
Salable mineral development, including mineral material exploration, sales, and free use permits (Map 2-14) would be closed on 472,800 acres (about 8% of sage-grouse core and general habitat).	Salable mineral development, including mineral material exploration, sales, and free use permits (Map 2-15) would be closed on 6,992,690 acres (all sage-grouse priority habitat), constituting about 43% of sage-grouse priority and general habitat, nearly 5	Impacts would be the same as under Alternative B (Map 2-16).	Salable mineral development, including mineral material exploration, sales, and free use permits (Map 2-17) would be closed on 472,800 acres.	Impacts would be the same as under Alternative D (Map 2-18).

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
	times the closures as Alternative A.			
Wind Energy				
Wind energy development would be allowed in most places across the planning area without specific restrictions (Map 2-29). 424,820 acres would be closed to wind development and 2,438,850 acres would have restrictions. A total of 27,970 wind turbines (2 megawatts) are projected to be developed through 2020.	Closing sage-grouse priority habitat to wind energy (5,033,240 acres) would reduce projected development to 2,821 turbines (Map 2-30) compared to Alternative A.	Closing sage-grouse priority and general habitat to wind energy development (11,531,340 acres) would reduce projected development to 2,821 turbines, the same as under Alternative B, but limiting areas where they could be built more than Alternative B (Map 2-31).	Closing 424,820 acres to wind energy and avoiding wind energy on 4,608,420 acres would reduce projected development to 21,863 turbines (Map 2-32) compared to Alternative A.	Closing 425,080 acres to wind energy and avoiding wind energy on 4,731,350 acres would reduce projected development to 2,821 turbines (Map 2-33), similar to the impacts under Alternative B.
Paleontology				
Surface disturbance from oil and gas development, livestock grazing, recreation and travel management would cause potential damage to undiscovered or undocumented paleontological resources. Surface disturbing activities would be prohibited on 68,550 acres and restricted on 93,580 acres, which could protect paleontological resources within these areas. Under this alternative, 871,780 acres would be closed to oil and gas development, potentially decreasing impacts to paleontological resources in these areas. Leasing of solid leasable minerals would be closed on 261,000 acres, potentially decreasing impacts to	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management would cause potential damage to undiscovered or undocumented paleontological resources. Closing 6,886,890 acres to oil and gas development would greatly expand the protection of paleontological resources within these areas as compared to 871,780 acres that would be closed to oil and gas development in Alternative A. Leasing of solid leasable minerals would be closed on 6,992,690 acres, greatly expanding the area	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management would cause potential damage to undiscovered or undocumented paleontological resources. A significant increase in the number of acres closed to oil and gas development (16,878,220 acres) could potentially decrease disturbance, resulting in fewer impacts to paleontological resources as compared to Alternative A. Leasing of solid leasable minerals would be closed on 6,992,690 acres, greatly expanding the area protected from mineral development.	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management would cause potential damage to undiscovered or undocumented paleontological resources. Impacts from oil and gas development would be similar to those in Alternative A with respect to the amount of acres closed to oil and gas development. However, the number of acres closed to oil and gas development would be slightly increased (964,860 acres in Alternative D, as opposed to 871,780 acres in Alternative A).	As with Alternative A, surface disturbance from oil and gas development, livestock grazing, recreation and travel management would cause potential damage to undiscovered or undocumented paleontological resources. However, the number of acres on which surface disturbance is prohibited would increase (68,550 acres in Alternative A as opposed to 337,860 acres in the Proposed LUP Amendments). The number of acres where surface disturbance is restricted would increase when compared to Alternative A (93,580 acres in A, as

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
paleontological resources in these areas. Under this alternative, 285,930 acres would be managed as ROW exclusion areas and 424,820 acres would be closed to wind development, potentially decreasing impacts to paleontological resources in these areas.	protected from mineral development. Additional restrictions on surface and sub-surface disturbing activities, such as ROW exclusion areas (5,271,440 acres) and areas closed to wind development (5,033,240 acres) are all greatly expanded as compared with Alternative A.	Additional restrictions on other surface and sub-surface activities, such as ROW exclusion areas (11,556,490 acres) and areas closed to wind energy (11,531,340 acres) would decrease the impacts to paleontological resources as compared with Alternative A.	Solid mineral leasing would be closed on 261,000 acres (Map 2-27), which is the same as Alternative A. Impacts from solid mineral leasing would be similar to those described in Alternative A. Additional restrictions on other surface and sub-surface activities, such as ROW exclusion areas (5,230,110 acres) and areas closed to wind energy (424,820) would decrease the impacts to paleontological resources as compared with Alternative A.	opposed to 160,630 acres in E). Closing 883,670 acres to oil and gas development would expand the protection of paleontological resources within these areas as compared to 871,780 acres that would be closed to oil and gas development in Alternative A. Impacts from ROW exclusion areas (285,930 acres) would be the same as Alternative A. Impacts from solid leasable minerals to paleontological resources would be the same as those described in Alternative A, with the same amount of acres being closed to solid leasable mineral development (Map 2-28).
Recreation Resources				
Allowing recreation use either through permits or casual use will continue in most areas. Popular recreation activities in the planning area include OHV use, hunting, camping, hiking, and scenic touring, among others.	Measures for the protection of sage-grouse in priority and general habitat could reduce some permit-based recreation opportunities compared to Alternative A. Conversely, opportunities for primitive and unconfined recreation could be enhanced indirectly through actions that reduce or remove surface disturbing and disruptive activities. This would occur primarily in sage-grouse priority habitat.	Impacts to permitted recreation opportunities would be similar to Alternative B, but expanded to include all non-motorized recreation, seasonally, within 4 miles of active leks. Impacts to other types of recreation would be the same as under Alternative B, except that impacts would be extended to include sage-grouse general habitat, where there would be additional removal of surface disturbing and disruptive activities.	Impacts to permitted recreation opportunities would be similar to Alternative A, although more large-group permitted activities could be denied.	Impacts would be roughly the same as under Alternative D.

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
Socioeconomics				
Continued management within the planning area would be expected to perpetuate trends that are already occurring within the economic study area. The quantified economic impacts across the entire planning area from 2013–2020 (present value) in 2011 dollars were estimated at $63.9 billion (B) of total economic output, $15.6B of total labor earnings, and $4.1B of local and state revenues. Approximately 37,700 jobs would be supported in 2020. Social impacts from continuation of current trends would occur in this alternative. These impacts would include stresses on community resources and community cohesion caused by high rates of resource development in some areas. In addition, wildlife/ecosystem conservation stakeholders would find this alternative highly unsatisfactory; mineral development, renewable energy development, and livestock grazing stakeholders would generally find this alternative to be most conducive to their interests and values; and recreation stakeholders would have mixed views.	Quantified economic impacts across the entire planning area from 2013–2020 (present value) in 2011 dollars were estimated at $59.1B of total economic output, $13.9B of total labor earnings, and $3.9B of local and state revenues. Approximately 33,600 jobs would be supported in 2020. A number of actions may increase costs to operators or reduce use levels relative to Alternative A in ways that could not be quantified, and thereby affect (increase or decrease in various instances) economic activity in ways that could not be estimated. Social impacts from stresses on community resources and community cohesion caused by high rates of resource development would be reduced relative to Alternative A. In addition, wildlife/ecosystem conservation stakeholders would find this alternative more favorable than Alternative A; mineral development, renewable energy development, and livestock grazing stakeholders could find this alternative to be less favorable; and recreation	Quantified economic impacts across the entire planning area from 2013–2020 (present value) in 2011 dollars were estimated at $49.9B of total economic output, $11.7B of total labor earnings, and $3.3B of local and state revenues. Approximately 27,900 jobs would be supported in 2020. Additional impacts relative to Alternative A, from actions that could not be quantified, would occur and would be most pronounced in this alternative. Social impacts from stresses on community resources and community cohesion caused by high rates of resource development would be most reduced by this alternative relative to Alternative A. In addition, wildlife/ecosystem conservation stakeholders would find this alternative most favorable of all the alternatives; mineral development and livestock grazing stakeholders would find this alternative least favorable; and renewable energy and recreation stakeholders could view this alternative very similarly to Alternative B.	Quantified economic impacts across the entire planning area from 2013–2020 (present value) in 2011 dollars were estimated at $62B of total economic output, $15.1B of total labor earnings, and $4.0B of local and state revenues. Approximately 35,400 jobs would be supported in 2020. Additional impacts relative to Alternative A, from actions that could not be quantified, would occur and would be less pronounced in this alternative than Alternatives B and C. Social impacts from stresses on community resources and community cohesion caused by high rates of resource development would be similar to Alternative A. In addition, wildlife/ecosystem conservation stakeholders would find this alternative unsatisfactory; mineral development stakeholders would find it favorable; renewable energy stakeholders would find it less favorable than Alternative A but more favorable than the other alternatives; and livestock grazing stakeholders and recreation stakeholders generally would view it similarly to Alternative A.	Quantified economic impacts across the entire planning area from 2013–2020 (present value) in 2011 dollars were estimated at $60.1B of total economic output, $14.3B of total labor earnings, and $3.9B of local and state revenues. Approximately 34,600 jobs would be supported in 2020. Additional impacts relative to Alternative A, from actions that could not be quantified, would occur and would be less pronounced in this alternative than Alternatives B and C. Social impacts from stresses on community resources and community cohesion caused by high rates of resource development may be somewhat reduced relative to Alternative A. In addition, wildlife/ecosystem conservation stakeholders would find this alternative more favorable than Alternative A or D, but less favorable than Alternative B or C; mineral development stakeholders could find it less favorable than Alternatives A and D, and more favorable than Alternatives B and C; renewable energy stakeholders would view it similarly to Alternative B; livestock grazing

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
	stakeholders could have mixed views.			stakeholders would view it somewhat similarly to Alternatives A and D and find it more favorable than Alternatives B and C; and recreation stakeholders could have mixed views.
Soils				
Soil resources would be impacted by actions that remove vegetation and expose the surface to accelerated wind and water erosion. The impacts would be greatest under this alternative because of fewer restrictions on newly permitted surface disturbing activities within the planning area. Managing 285,930 acres as ROW exclusion areas, 871,780 acres as unavailable for oil and gas leasing, 40,980 acres as NSO areas, and 68,550 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to reduce soil erosion and maintain soil resources.	Soil resources would be impacted by actions that remove vegetation and expose the surface to accelerated wind and water erosion. Managing 5,271,440 acres as ROW exclusion areas, 6,886,890 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to reduce soil erosion and maintain soil resources.	Soil resources would be impacted by actions that remove vegetation and expose the surface to accelerated wind and water erosion. Managing 11,556,490 acres as ROW exclusion areas, 16,878,220 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to reduce soil erosion and maintain soil resources. Because such restrictions are the most extensive under this alternative, impacts to soil resources would be the least intensive.	Soil resources would be impacted by actions that remove vegetation and expose the surface to accelerated wind and water erosion. Managing 5,230,110 acres as ROW exclusion areas and 964,860 acres as closed to oil and gas leasing would reduce surface disturbances and help to reduce soil erosion and maintain soil resources.	Soil resources would be impacted by actions that remove vegetation and expose the surface to accelerated wind and water erosion. Managing 285,930 acres as ROW exclusion areas, 883,670 acres as closed to oil and gas leasing, 441,690 acres as NSO areas, and 337,860 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to reduce soil erosion and maintain soil resources.
Special Designations and Management Areas				
Special Designations/Management Areas (SD/MA) would be managed to protect the individual values for which they are designated. Restrictions on surface disturbance would indirectly	Designating all sage-grouse priority habitat areas as a sage-grouse conservation ACEC would greatly increase the area for which special values would be established and protected compared to Alternative A.	Designating all sage-grouse priority habitat areas and Audubon Important Bird Areas as a sage-grouse conservation ACEC would greatly increase the area for which special values would be established and protected	Impacts would be similar to Alternative A, except more area would be protected from surface disturbance.	Impacts would be the same as under Alternative D.

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affect SD/MAs by further protecting values such as wilderness, Special Status Species, cultural resources, recreation opportunities, etc.	Adding 5,000,402 acres as SD/MAs would be a significant increase over Alternative A (Map 2-34).	compared to Alternative A. Adding 6,398,221 acres as SD/MAs would be a significant increase over Alternative A (Map 2-35).		
Special Status Species and Sage-grouse				
Impacts to Special Status Species habitat would result from surface disturbing activities, primarily renewable and non-renewable energy development and associated infrastructure (pipelines, power lines, and roads). Estimated initial surface disturbance from oil, gas, and CBNG is 130,330 acres. Additional surface disturbing activities from wind energy, pipelines, power lines, roads, and mineral development could impact Special Status Species habitat through loss, alteration, and fragmentation of habitats and displacement of wildlife. Continued livestock grazing practices could reach Wyoming Standards for Rangeland Health or the Forest Service equivalent. Lek buffers and other existing restrictions would protect lands, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. **Greater Sage-Grouse:** In addition to the impacts described above, the current management could continue in	Under Alternative B, impacts from surface disturbing activities are lower than all alternatives except for Alternative C. Management would close Greater Sage-Grouse priority habitat to oil, gas, and CBNG leasing, wind energy, as well as other minerals. Estimated initial surface disturbance from oil, gas, and CBNG is 104,050 acres. Additional management for livestock grazing could allow for greater achievement of Wyoming Standards for Rangeland Health or the Forest Service equivalent, and provide improved habitat for Special Status Species, especially those that inhabit riparian and wetland areas. Larger lek buffers and restrictions to the density of disturbance for surface disturbing activities to protect sage-grouse priority habitat would protect more land, especially sagebrush habitat, from surface	Impacts from surface disturbing activities are the lowest under Alternative C. Management would close Greater Sage-Grouse priority and general habitat to oil, gas, CBNG leasing, and wind energy; and would close priority habitat to other minerals. Estimated initial surface disturbance from oil, gas, and CBNG is 85,140 acres. Closing priority habitat to livestock grazing could allow for improved habitat and ample forage for wildlife, improved water quality for fisheries, and protection of special status plants from trampling, overgrazing, and soil loss. Larger lek buffers and restrictions to the density of disturbance for surface disturbing activities to protect sage-grouse habitat would protect more land, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. Overall, Alternative C would provide the greatest	Alternative D could have impacts from surface disturbing activities that are similar to Alternative A. In some cases, such as ROWs and wind energy, Alternative D protects all core sage-grouse habitat. Estimated initial surface disturbance from oil, gas, and CBNG is 122,910 acres. Impacts from surface disturbing activities such as livestock grazing and other mineral development could lead to loss, alteration, and fragmentation of habitat and displacement of special status wildlife. Lek buffers, similar to Alternative A and other restrictions would protect lands, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. **Greater Sage-Grouse:** In addition to the impacts described above, the proposed lek buffers are insufficient to provide Greater Sage-Grouse undisturbed habitat and prevent habitat fragmentation, although	Overall, impacts to Special Status Species habitat from implementing the Proposed LUP Amendments would be similar to Alternative A although there would be greater protection to PHMAs (core only). Estimated initial surface disturbance from oil, gas, and CBNG is 112,330 acres. All PHMAs (core only) would be an avoidance area for wind development, protecting more habitat than Alternative A from loss, alteration, and fragmentation of habitat and displacement of special status wildlife. Management for livestock grazing could allow for achievement of Wyoming Standards for Rangeland Health or the Forest Service equivalent, and provide improved habitat for Special Status Species, especially those that inhabit riparian and wetland areas. Lek buffers larger than Alternative A and other restrictions would protect lands, especially sagebrush habitat, from surface

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
habitat loss, habitat fragmentation, and human disturbance and declines of sage-grouse are likely to progress.	disturbing activities, habitat loss, and fragmentation. **Greater Sage-Grouse:** Alternative B would reduce surface disturbance and disruptive activities in priority sage-grouse habitat. The protection of priority sagebrush habitat could provide Greater Sage-Grouse the undisturbed, contiguous habitat necessary for the species to maintain or improve population numbers.	protection of sagebrush habitat among all the alternatives. **Greater Sage-Grouse:** Alternative C would reduce surface disturbance and disruptive activities in priority sage-grouse habitat, and in some cases general habitat (oil, gas, CBNG, ROWs, wind). The protection of priority and general sagebrush habitat could provide Greater Sage-Grouse the largest area of undisturbed, contiguous habitat necessary for the species to maintain or improve population numbers.	restrictions on density of disturbance could allow for some protection of contiguous habitat. Other management could provide protection of sage-grouse core habitat from wind development, by reducing habitat loss, fragmentation, and direct impacts from wind turbines and overhead structures.	disturbing activities, habitat loss, and fragmentation. **Greater Sage-Grouse:** In addition to the impacts described above, the proposed lek buffers are sufficient to provide Greater Sage-Grouse undisturbed habitat and prevent habitat fragmentation. Other management could provide protection of PHMAs (core only) from wind development, by reducing habitat loss, fragmentation, and direct impacts from wind turbines and overhead structures.
Transportation and Access Management				
Under this alternative, areas where surface disturbing activities are prohibited (including buffer areas around sage-grouse leks, nesting areas, and other sensitive areas) would limit travel and access to designated roads and trails in these areas (Map 2-1). Surface disturbing activities under this alternative are prohibited on 68,550 acres and restricted on 93,580 acres. The development of roads and transportation systems required for oil, gas and mineral development would increase travel and access in those areas. In addition, areas	The development of roads and transportation systems required for oil, gas, and mineral development would increase travel and access in those areas. Areas closed to oil and gas development (6,886,890 acres), mineral materials (6,992,690 acres), locatable minerals (1,761,550 acres), and solid leasable minerals (6,992,690 acres), could limit or restrict travel and access in those areas. Travel in these areas would be limited to existing roads and trails. Compared with Alternative A, the number of acres closed to minerals	The development of roads and transportation systems required for oil, gas and mineral development would increase travel and access in those areas. Areas closed to oil and gas development (16,878,220 acres), mineral materials (6,992,690 acres), locatable minerals (1,761,550 acres) and solid leasable minerals (6,992,690 acres), could limit or restrict travel and access in those areas. Travel in these areas would be limited to existing roads and trails. Compared with Alternative A, areas closed to minerals activities are much larger, expanding the area of	As with Alternative A, areas where surface disturbing activities are prohibited (including buffer areas around sage-grouse leks, nesting areas, and other sensitive areas) would limit travel and access to designated roads and trails in these areas. Surface disturbing activities under this alternative are restricted on 75,870 acres. The development of roads and transportation systems required for oil, gas, and mineral development would increase travel and access in those areas. Areas closed to oil and gas development	As with Alternative A, areas where surface disturbing activities are prohibited (including buffer areas around sage-grouse leks, nesting areas, and other sensitive areas) would limit travel and access to designated roads and trails in these areas. Surface disturbing activities under this alternative are prohibited on 337,860 acres and restricted on 160,630 acres. The development of roads and transportation systems required for oil, gas, and mineral development would increase travel and access in those areas. Areas closed to

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closed to oil and gas development (871,780 acres), mineral materials (472,800 acres), locatable minerals (1,761,550 acres) and solid leasable minerals (261,000 acres), could limit or restrict travel and access in those areas. Travel in these areas would be limited to existing roads and trails. Mineral development could potentially affect the location of subsequent transportation systems in those areas where development of minerals occurs. Areas open to OHV use would provide motorized access to much of the decision area. Acres for other surface and sub-surface disturbing activities, such as ROW exclusion areas (285,930 acres) and areas closed to wind energy (424,820 acres) could also limit or preclude transportation development in these areas.	activities is much larger, expanding the area where impacts could occur. Mineral development could potentially affect the location of subsequent transportation systems where minerals are developed. Roads, primitive roads, and trails in priority habitat not designated in travel management plans would be restored, removing them from travel and access uses under this alternative. Acres for other surface and sub-surface disturbing activities, such as ROW exclusion areas (5,271,440 acres) and areas closed to wind energy (5,033,240) are all greatly expanded when compared with Alternative A, potentially limiting or precluding transportation development in these areas.	impact. Mineral development could potentially affect the location of subsequent transportation systems in those areas where minerals are developed. Prohibiting new road construction within four miles of active sage-grouse leks and avoiding new road construction in sage-grouse priority and general habitat would restrict travel and access in these areas. Acres for other surface and sub-surface disturbing activities, such as ROW exclusion areas (11,556,490 acres), areas closed to wind energy (11,531,340 acres) are all greatly expanded when compared with Alternative A, potentially limiting or precluding transportation development in these areas.	(964,860 acres), mineral materials (472,800 acres), locatable minerals (1,761,550 acres) and solid leasable minerals (261,000 acres), could limit or restrict travel and access in those areas. Travel in these areas would be limited to existing roads and trails. Compared with Alternative A, acres closed to minerals activities are very similar. Prohibiting new road construction within 0.25 mile of active sage-grouse leks, and avoiding new road construction in sage-grouse core and general habitat would restrict travel and access in these areas. Acres for other surface and sub-surface disturbing activities, such as ROW exclusion areas (5,230,110 acres) and areas closed to wind energy (424,820) would be expanded when compared with Alternative A, potentially limiting or precluding transportation development in these areas.	oil and gas development (883,670 acres), mineral materials (472,800 acres), locatable minerals (1,761,550 acres) and solid leasable minerals (483,420 acres), could limit or restrict travel and access in those areas. Travel in these areas would be limited to existing roads and trails. Compared with Alternative A, acres closed to minerals activities are very similar. Prohibiting primary and secondary roads within 1.9 miles of active sage-grouse leks, and avoiding new road construction in PHMAs and GHMAs would restrict travel and access in these areas. Acres for other surface and sub-surface disturbing activities, such as ROW exclusion areas (285,930 acres) and areas closed to wind energy (425,080 acres) would be expanded when compared with Alternative A, potentially limiting or precluding transportation development in these areas.
Vegetation				
Vegetation and vegetation communities would primarily be impacted by different forms of surface disturbance and disruptive activities. These activities would result in both short and long term impacts to	Impacts to vegetation from fluid minerals development and associated surface disturbing activities would be reduced compared to Alternative A, as short-term surface disturbances would	Impacts to vegetation from surface disturbing activities could be reduced compared to Alternative A, as short-term surface disturbances from fluid minerals development would be	Impacts to vegetation from surface disturbing activities would be the same as Alternative A, except the level of intensity would be reduced as the total short-term surface disturbance	Impacts from fluid mineral activities would be the same as Alternative A, except the level of intensity would be different as the projected well development would be reduced to 12,355 oil and

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small localized areas as well as large areas from the removal or damage of vegetative surface cover and vegetation habitat. These impacts would result in various levels of decreases to plant community health, diversity, and impact habitats that are susceptible to invasive/noxious weeds. Increases in invasive and noxious weeds would result in a decline to native species compromising the overall habitat health (through ecological processes). Impacts to vegetation from fluid minerals development would have 130,330 acres of short-term surface disturbance and 39,050 acres of long-term surface disturbance. Most of the development and associated impacts such as loss of vegetation habitat would be from the construction and maintenance of 13,653 oil and gas wells and 2,758 CBNG wells. Impacts to vegetation could be eliminated on 472,800 acres that are closed to mineral materials development as well as on 261,000 acres closed to solid mineral development and 1,761,550 acres withdrawn to locatable mineral development. These closures would help to preserve plant community functions and health as well as reduce	be reduced to 104,050 acres and long-term surface disturbance acres to 33,540. Surface disturbing impacts from oil, gas, and CBNG wells could be reduced compared to Alternative A, as the number of wells would be reduced to 11,555 oil and gas wells and 2,154 CBNG wells. These reductions would reduce the total acres developed for fluid minerals thus reducing habitat fragmentation. Impacts to vegetation from solid minerals development, minerals materials development, and wind energy development would decrease compared to Alternative A. Impacts to vegetation from locatable minerals development could be reduced with the recommended withdrawal of 5,118,070 acres from development. The recommended withdrawals could reduce vegetation removal, habitat fragmentation, and invasive species establishment associated with minerals development and associated surface disturbing activities. Protection for vegetation habitat health and continuity would be increased compared to Alternative A,	reduced to 85,140 acres and long-term surface disturbances would be reduced to 27,030 acres. These disturbances would be reduced compared to Alternative A, as fluid mineral well development would be reduced to 9,533 oil and gas wells and 1,594 CBNG wells. These reductions would reduce the total acres of vegetation lost or impacted to fluid development and associated surface disturbing activities which would maintain habitat functions and health in these areas. Impacts to vegetation from solid minerals development, locatable minerals development, and minerals materials development would decrease compared to Alternative A. These closures would reduce vegetation removal, habitat fragmentation, and invasive species establishment associated with minerals development and associated surface disturbing activities. Protection for vegetation habitat health and continuity would be increased compared to Alternative A, as ROW and wind energy development and associated surface disturbing activities would be excluded or closed on 11,531,340 acres.	acres from fluid minerals development would be reduced to 122,910 acres and 37,720 long-term surface disturbance areas. This reduction in surface disturbance would help maintain ecological processes important to plant community health and ecological processes. The reduction in impacts to vegetation resources compared to Alternative A would mostly be due to the reduction of fluid mineral wells, with oil and gas wells being reduced to 13,083 wells and CBNG reduced to 2,686 wells. Reduction in wells could also reduce associated surface disturbances such as the construction of roads and utilities which could reduce vegetation removal compared to Alternative A. Impacts from surface disturbing activities for solid minerals development, mineral materials, and recommended withdrawals of locatable minerals development, would be the same as Alternative A. Impacts to vegetation from wind energy development would be reduced compared to Alternative A, as the amount of acres closed to wind energy development would increase to 424,820	gas wells and 2,462 CBNG wells. This reduction in wells would help maintain plant community ecological functions and maintain vegetation habitat continuity. Compared to Alternative A, surface disturbing activities from fluid minerals development would be reduced, which would reduce short-term surface disturbance to 112,330 acres and long-term surface disturbances to 35,430 acres. Surface disturbing activities from solid leasable minerals and mineral materials development would be the same as Alternative A. Withdrawals of locatable minerals would be proposed on 252,070 acres, which would reduce vegetation removal and habitat fragmentation as compared to Alternative A. Impacts to vegetation from wind energy development would be reduced compared to Alternative A, as the amount of acres closed to wind energy development would increase to 425,080 acres and restricted on 4,731,350 acres. These closures/restrictions would reduce the acres of surface disturbances from wind energy development which would reduce vegetation loss and habitat fragmentation.

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habitat fragmentation. Surface disturbing impacts from ROW development would be excluded on 285,930 acres and avoided on 2,460,340 acres, which could reduce vegetation loss, habitat fragmentation, and invasive species establishment. Vegetation habitat continuity and ecological processes could be maintained as 424,820 acres would be closed to wind energy development and 2,438,850 acres would be restricted to wind energy development. These restrictions could reduce vegetation loss and habitat fragmentation associated with surface disturbing activities associated with wind energy development.	as ROW development and associated surface disturbing activities would be excluded on 5,271,440 acres and avoided on 6,357,180 acres.		acres even though the amount of acres restricted to wind energy development would be reduced to 4,608,420 acres. These closures/restrictions would reduce the acres of surface disturbances which would reduce vegetation loss and habitat fragmentation.	
Visual Resources				
Visual resource categories and objectives would be the same for all alternatives. Although the amount of visual impacts would vary by alternative, it is assumed that all visual resource management (VRM)/scenic integrity objective (SIO)/visual quality objective (VQO) objectives would be met under all alternatives.				
Visual resources could decline in quality due to surface disturbance from mineral and energy development, recreation activities, and other similar activities. The bulk of changes to the visual quality of the landscape would occur in VRM Class III or IV (BLM), moderate or low SIO (Forest Service), or the Modification level VQO (Forest Service).	Visual resources in sage-grouse priority habitat would be largely preserved due to efforts to protect sage-grouse and sagebrush habitat, which limit surface disturbance compared to Alternative A.	Visual resources in sage-grouse priority and general habitat would be largely preserved due to efforts to protect sage-grouse and sagebrush habitat, which limit surface disturbance compared to Alternative A.	Impacts to visual resources would be similar to Alternative A, except some visual resources could be spared due to limitations placed on surface disturbance and development density compared to Alternative A.	Impacts to visual resources would be less than Alternative A, due to limitations placed on surface disturbance and development density.

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Watershed and Water Quality				
Impacts to water resources would occur from surface disturbing and development activities (e.g., mineral development, ROW development) that result in vegetation removal, soil compaction, increased overland flow, and increased sediment, salt, and nutrient transport to water bodies. The impacts would be greatest under this alternative because of fewer restrictions on newly permitted surface disturbing activities within the planning area. Managing 285,930 acres as ROW exclusion areas, 871,780 acres as unavailable for oil and gas leasing, 40,980 acres as NSO areas, and 68,550 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain soil and vegetation resources that would serve to slow runoff and decrease erosion and inputs into surface water features.	Impacts to water resources would occur from surface disturbing and development activities (e.g., mineral development, ROW development) that result in vegetation removal, soil compaction, increased overland flow, and increased sediment, salt, and nutrient transport to water bodies. Managing 5,271,440 acres as ROW exclusion areas, 6,886,890 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to maintain soil and vegetation resources that would serve to slow runoff and decrease erosion and inputs into surface water features.	Impacts to water resources would occur from surface disturbing and development activities (e.g., mineral development, ROW development) that result in vegetation removal, soil compaction, increased overland flow, and increased sediment, salt, and nutrient transport to water bodies. Managing 11,556,490 acres as ROW exclusion areas, 16,878,220 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to maintain soil and vegetation resources that would serve to slow runoff and decrease erosion and inputs into surface water features. Because such restrictions are the most extensive under this alternative, impacts to water resources would be the least intensive.	Impacts to water resources would occur from surface disturbing and development activities (e.g., mineral development, ROW development) that result in vegetation removal, soil compaction, increased overland flow, and increased sediment, salt, and nutrient transport to water bodies. Managing 5,230,110 acres as ROW exclusion areas and 964,860 acres as closed to oil and gas leasing would reduce surface disturbances and help to maintain soil and vegetation resources that would serve to slow runoff and decrease erosion and inputs into surface water features.	Impacts to water resources would occur from surface disturbing and development activities (e.g., mineral development, ROW development) that result in vegetation removal, soil compaction, increased overland flow, and increased sediment, salt, and nutrient transport to water bodies. Managing 285,930 acres as ROW exclusion areas, 883,670 acres as closed to oil and gas leasing, 441,690 acres as NSO areas, and 337,860 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain soil and vegetation resources that would serve to slow runoff and decrease erosion and inputs into surface water features.
Wild Horses				
Impacts to wild horses would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources. The impacts would	Impacts to wild horses would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove	Impacts to wild horses would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources.	Impacts to wild horses would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources.	Impacts to wild horses would occur from surface-disturbing and development activities (e.g., mineral development, ROW development) that remove or degrade forage resources.

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be greatest under this alternative because of fewer restrictions on newly permitted surface disturbing activities within the planning area. Managing 285,930 acres as ROW exclusion areas, 871,780 acres as unavailable for oil and gas leasing, 40,980 acres as NSO areas, and 68,550 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain forage resources, but to a lesser extent than the other alternatives.	or degrade forage resources. Managing 5,271,440 acres as ROW exclusion areas, 6,886,890 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas would reduce surface disturbances and help to maintain forage resources.	Managing 11,556,490 acres as ROW exclusion areas, 16,878,220 acres as closed to oil and gas leasing, and 2,117,160 acres as NSO areas, would reduce surface disturbances and help to maintain forage resources. Because such restrictions are the most extensive under this alternative, impacts to wild horses would be the least intensive.	Managing 5,230,110 acres as ROW exclusion areas and 964,860 acres as closed to oil and gas leasing would reduce surface disturbances and help to maintain forage resources.	Managing 285,930 acres as ROW exclusion areas, 883,670 acres as closed to oil and gas leasing, 441,690 acres as NSO areas, and 337,860 acres in which surface disturbing activities are prohibited would reduce surface disturbances and help to maintain forage resources.
Wildland Fire and Fuels				
Wildland fire management would primarily be impacted by different forms of surface disturbing activities associated with minerals and energy development which could increase human presence and the use of heavy equipment. This increase in human presence and heavy equipment use could increase additional ignition sources, the probability of wildland fire occurrence, and the need for fire suppression activities. Surface disturbing activities could reduce fire fuels loads from vegetation removal, increase fire breaks from roads and clearings as well as improve access for fire suppression activities in these	Surface disturbing impacts from ROW development would be reduced compared to Alternative A, as areas closed to ROW development would increase to 5,271,440 acres which would reduce human presence and ignition sources from development. Impacts from wind energy development would be reduced compared to Alternative A, as areas closed to wind energy development would increase to 5,033,240 acres which would reduce human and machinery caused wildfires. Potential wildfires from fluid minerals development would be	Surface disturbing impacts from ROW and wind energy development would be reduced compared to Alternative A, as areas excluded from ROWs or closed to wind development would increase to 11,556,490 acres, which would reduce human presence and ignition sources from development. Potential wildfires from fluid mineral development would be reduced compared to Alternative A, as the number of wells developed would be reduced to 9,5335 oil and gas and 1,594 CBNG wells. The development of these well would disturb fewer acres compared to Alternative A, with 85,140	Surface disturbing impacts from ROW development would be reduced compared to Alternative A, as areas excluded from ROW development would increase to 5,230,110 acres which would reduce human presence and ignition sources from development. Impacts from wind energy development would be reduced compared to Alternative A, as areas closed to wind energy development would increase to 424,820 acres which could reduce human and machinery caused wildfires. Potential wildfires from fluid mineral development would be reduced compared to	Surface disturbing impacts from ROW development would be similar to Alternative A. Impacts from wind energy development would be reduced compared to Alternative A, as areas closed to wind energy development would increase to 425,080 acres and avoidance acres would increase to 4,731,350 acres which could reduce human and machinery caused wildfires. Potential wildfires from fluid minerals development would be reduced compared to Alternative A, as the number of wells developed would be reduced to 12,355 oil and gas and 2,462 CBNG wells.

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areas. ROW development would be excluded on 285,930 acres which could reduce human presence and ignition sources such as vehicles and machinery that could cause wildland fires. Impacts from wind energy development would be eliminated on 424,820 acres that are prohibited to wind energy development and reduced on 2,438,850 acres that are restricted for wind energy development which would reduce human and machinery caused wildfires. Potential sources of wildfires from fluid minerals development would increase on 130,330 acres in the short-term and 39,050 acres in the long-term in areas outside of minerals development restrictions where fluid mineral development could reduce plant community health and increase the risk or human-caused fire starts. Most of the development and associated impacts such as loss of vegetation habitat would be from the construction and maintenance of 13,653 oil and gas wells and 2,758 CBNG wells. Potential fire ignition sources from minerals development would be eliminated on 472,800 acres that are closed to mineral materials development and 261,000 acres closed to solid	reduced compared to Alternative A, as the number of wells developed would be reduced to 11,555 oil and gas and 2,154 CBNG wells. The development of these wells would disturb fewer acres compared to Alternative A, with 104,050 acres of short-term surface disturbance and 33,540 acres of long-term surface disturbance. Impacts to wildland fire from solid minerals development, locatable minerals development, and minerals materials development would decrease compared to Alternative A. The closures or withdrawals would reduce potential fire ignition sources associated with human presence, motor vehicle travel, and construction of minerals development. Within priority habitats, fuels treatments would be designed and implemented to protect sagebrush systems. Burned areas in priority habitats would be restored and recovered. Priority sage-grouse habitat suppression would prioritize firefighter and public safety to conserve the habitat. General sage-grouse habitat would have a high suppression priority where	acres of short-term surface disturbance and 27,030 acres of long-term surface disturbance Impacts to wildland fire from solid minerals development, locatable minerals development, and minerals materials development would decrease compared to Alternative A. These closures/withdrawals would reduce potential fire ignition sources associated with human presence, motor vehicle travel, and construction of minerals development. Within priority and general habitats, fuels treatments would be designed and implemented to protect sagebrush systems. Restoration and suppression practices would be the same as Alternative B.	Alternative A, as the number of wells developed would be reduced to 13,083 oil and gas and 2,686 CBNG wells. The development of oil and gas wells would disturb fewer acres compared to Alternative A, with 122,910 acres of short-term surface disturbance and 37,720 acres of long-term surface disturbance. Impacts from surface disturbing activities for solid minerals development, mineral materials, and locatable minerals development would be the same as Alternative A. Wildfire restoration and suppression actions would be the same as Alternative A.	The development of these well would disturb fewer acres compared to Alternative A, with 112,330 acres of short-term surface disturbance and 35,430 acres of long-term surface disturbance. Surface disturbing activities from solid leasable minerals and mineral material development would be the same as Alternative A, and proposed locatable mineral withdrawals, 252,070 acres, would be greater than Alternative A. The closures and withdrawals would reduce potential human and development caused wildfires. Within PHMAs (core only), fuels treatments would be designed and implemented to protect existing sagebrush systems (refer to WGFD Protocols for Treating Sagebrush to Benefit Sage-Grouse in Appendix A). Burned areas within PHMAs (core only) would be restored. Within these areas, suppression practices would be the same as Alternative B. General sage-grouse habitat would have a suppression priority commensurate with the local fire plan.

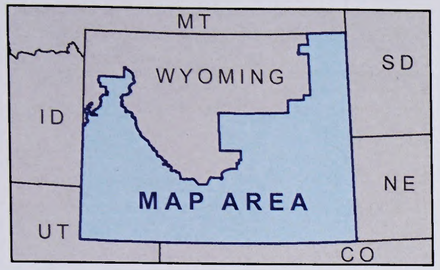
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leasable minerals development. These closures would help to preserve plant community functions, reduce habitat fire breaks, and increase fire fuel loads in these areas. Impacts from locatable minerals development would be eliminated on 1,761,550 acres that are withdrawn from development and could be eliminated on 131,070 acres that are proposed for withdrawal. The withdrawals could eliminate potential fire sources associated with development and surface disturbing activities.	wildfires threaten priority sage-grouse habitat.			
Wildlife and Fisheries				
Impacts would result from surface disturbing activities, primarily renewable and non-renewable energy development and associated infrastructure (pipelines, power lines, and roads). Estimated initial surface disturbance from oil, gas, and CBNG is 130,330 acres. Additional surface disturbing activities from wind energy, pipelines, power lines, roads, and mineral development could impact wildlife and fish through loss, alteration, and fragmentation of habitats and displacement of wildlife. Continued livestock grazing practices could reach	Under Alternative B, impacts from surface disturbing activities are lower than all alternatives except for Alternative C. Management would close Greater Sage-Grouse priority habitat to oil, gas, and CBNG, wind energy, as well as other minerals. Estimated initial surface disturbance from oil, gas, and CBNG is 104,050 acres. Additional management for livestock grazing could allow for greater achievement of Wyoming Standards for Rangeland Health or the Forest Service	Impacts from surface disturbing activities are the lowest under Alternative C. Management would close Greater Sage-Grouse priority and general habitat to oil, gas, CBNG, and wind energy; and would close priority habitat to other minerals. Estimated initial surface disturbance from oil, gas, and CBNG is 85,140 acres. Closing priority habitat to livestock grazing could allow for improved habitat and ample forage for wildlife and improved water quality for fisheries.	Alternative D could have impacts from surface disturbing activities that are similar to Alternative A. In some cases, such as ROWs and wind energy, Alternative D protects all core sage-grouse habitat. Estimated initial surface disturbance from oil, gas, and CBNG is 122,910 acres. Impacts from surface disturbing activities such as livestock grazing and other mineral development could lead to loss, alteration, and fragmentation of habitat and displacement of wildlife. Lek buffers, similar to Alternative A and other	Overall, impacts to wildlife and fish habitat from implementing the Proposed LUP Amendments would be similar to Alternative A. Estimated initial surface disturbance from oil, gas, and CBNG is 112,330. All PHMAs (core only) would be an avoidance area for wind development, protecting more habitat than Alternative A from loss, alteration, and fragmentation of habitat and displacement of wildlife. Management for livestock grazing could allow for achievement of Wyoming Standards for Rangeland

Alternative A (No Action Alternative)	Alternative B	Alternative C	Alternative D	Proposed LUP Amendments
Wyoming Standards for Rangeland Health or the Forest Service equivalent. Lek buffers and other existing restrictions would protect lands, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. For additional information on effects to Forest Service wildlife and fish, please see the Biological Evaluation and Management Indicator Species Report in Appendix M.	equivalent, and provide improved habitat for wildlife and fisheries. Larger lek buffers and restrictions to the density of disturbance for surface disturbing activities to protect sage-grouse habitat would protect more land, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. For additional information on effects to Forest Service wildlife and fish, please see the Biological Evaluation and Management Indicator Species Report in Appendix M.	Larger lek buffers and restrictions to the density of disturbance for surface disturbing activities to protect sage-grouse habitat would protect more land, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. Overall, Alternative C would provide the greatest protection of sagebrush habitat among all the alternatives. For additional information on effects to Forest Service wildlife and fish, please see the Biological Evaluation and Management Indicator Species Report in Appendix M.	restrictions would protect lands, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. For additional information on effects to Forest Service wildlife and fish, please see the Biological Evaluation and Management Indicator Species Report in Appendix M.	Health or the Forest Service equivalent, and provide improved habitat for wildlife and fisheries. Lek buffers larger than Alternative A and other restrictions would protect lands, especially sagebrush habitat, from surface disturbing activities, habitat loss, and fragmentation. For additional information on effects to Forest Service wildlife and fish, please see the Biological Evaluation and Management Indicator Species Report in Appendix M.

NOTE:

Map 3-19 was deleted from the Proposed Land Use Plan (LUP) Amendments/Final Environmental Impact Statement (EIS), based on public comments received on the Draft LUP Amendments/Draft EIS.

Wyoming Sage Grouse Land Use Plan Amendments



Map 1-1: Planning Area

- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sagebrush Focal Areas
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Sage Grouse General Habitat Management Area
- County Boundaries

N

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Kilometers

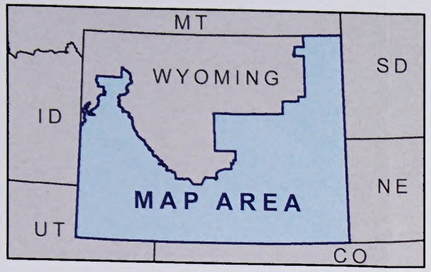
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Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Wheatland
Platte
Goshen
Torrington
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 1-2:
Surface Management



- Bankhead Jones
- Bureau of Land Management
- Bureau of Reclamation
- Military Reservations
- Fish & Wildlife Service
- Forest Service
- National Grasslands
- National Park Service
- Other Federal Agencies
- Private
- State
- State/City/County Wildlife and Recreation Areas

- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- County Boundaries

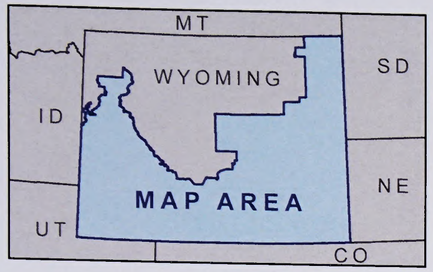
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Kilometers

0 20 40 60 80
Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Casper
Casper Field Office
Douglas
Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.
Albany
Laramie
Laramie
Converse
Niobrara
Lusk
Thunder Basin N.G.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Wheatland
Platte
Goshen
Torrington
Cheyenne
80
25
90

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Wyoming Sage Grouse Land Use Plan Amendments



Map 1-3:
Federal Mineral Estate

- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Federal Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Map 1-4:
WAFWA Management Zones & EIS Planning Areas

WAFWA Management Zone Boundaries

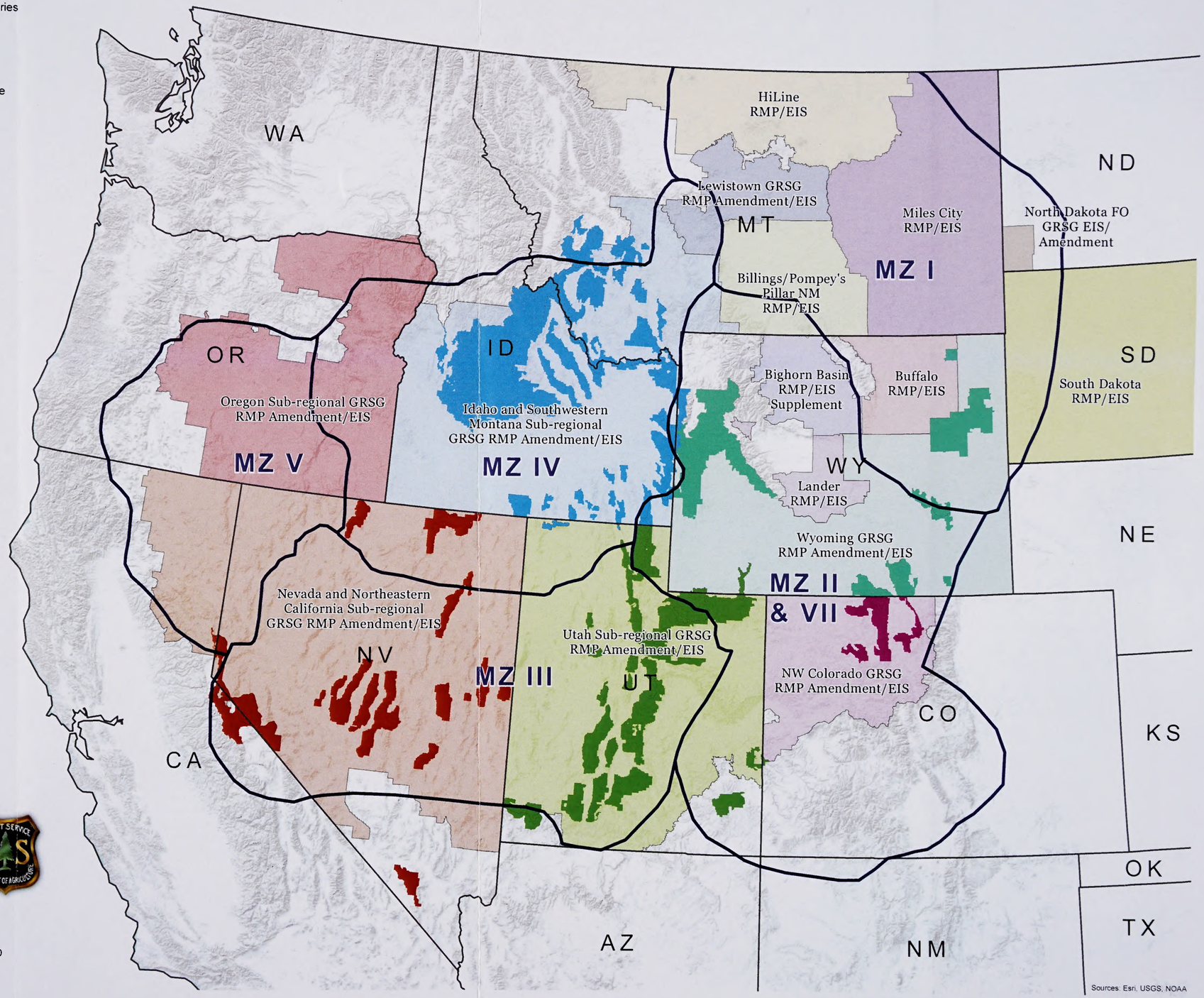
State Boundaries

BLM EIS Planning Boundaries

Forest Service Administrative Units

*Forest Service unit colors correspond to the EIS they will be analyzed within.

National BLM & USFS Greater Sage Grouse Planning Strategy



0 50 100 150 200
Kilometers

0 50 100 150 200
Miles

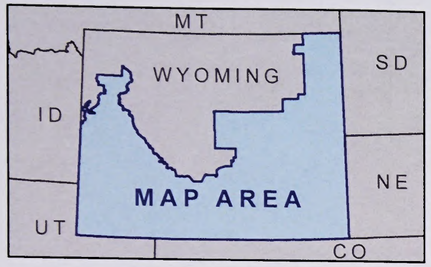
Wyoming Sage Grouse Land Use Plan Amendments
Final Environmental Impact Statement - May 2015

Sources: Esri, USGS, NOAA

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-1: Alternative A
Greater Sage Grouse Surface Disturbance/ Surface Occupancy Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Surface Disturbance Prohibited
- Surface Disturbance Restricted
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

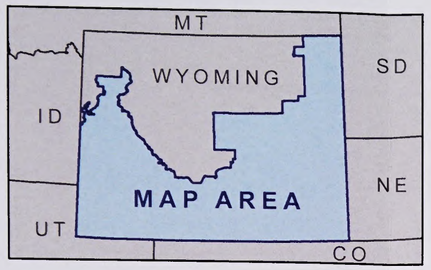
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-2: Alternative D
Greater Sage Grouse Surface Disturbance/ Surface Occupancy Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Surface Disturbance Restricted
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

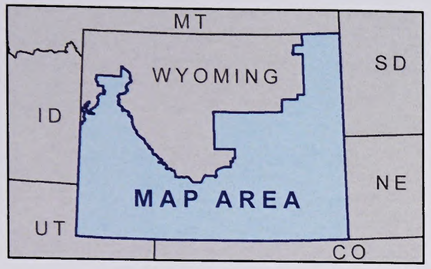
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Rawlins Field Office
Medicine Bow N.F.
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-3: Proposed Plan
Greater Sage Grouse Surface Disturbance/ Surface Occupancy Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- Surface Disturbance Prohibited
- Surface Disturbance Restricted
- BLM and USFS Surface Management
- County Boundaries

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0 20 40 60 80
Miles

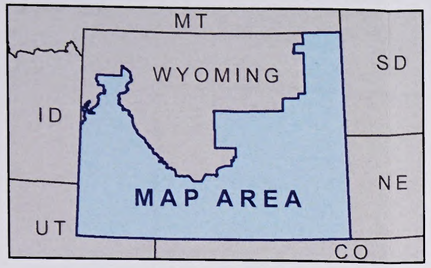
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-4: Alternative A
Oil and Gas Leasing Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Oil & Gas Leasing
- No Surface Occupancy
- Controlled Surface Use
- Federal Oil and Gas Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

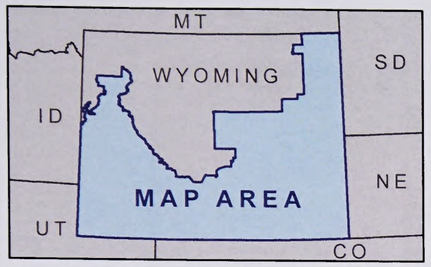
Note: Identified restrictions (NSO & CSU) displayed on this map are in addition to existing restrictions already approved through previous planning efforts. Lands closed to leasing are displayed across Greater Sage Grouse core and connectivity habitat only. Additional closures exist beyond the boundaries of core and connectivity habitat.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Albany
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-5: Alternative B
Oil and Gas Leasing Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Oil and Gas Leasing
- Federal Oil and Gas Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

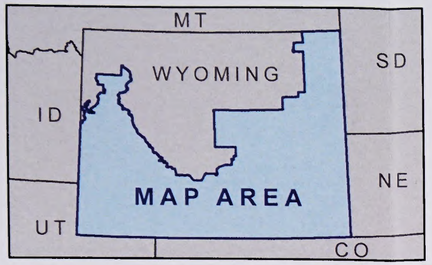
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
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Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Medicine Bow N.F.
Albany
Laramie
Laramie
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Cheyenne
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-6: Alternative C
Oil and Gas Leasing Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Oil and Gas Leasing
- Federal Oil and Gas Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

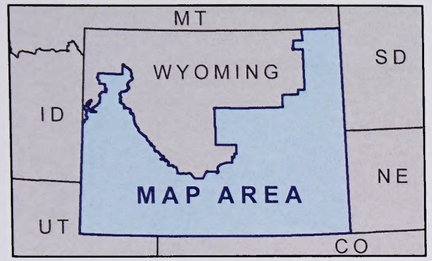
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Newcastle
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Teton
Fremont
Pinedale
Casper
Douglas
Lusk
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Laramie
Cheyenne
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-7: Alternative D
Oil and Gas Leasing Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Oil and Gas Leasing
- No Surface Occupancy
- Controlled Surface Use
- Federal Oil and Gas Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

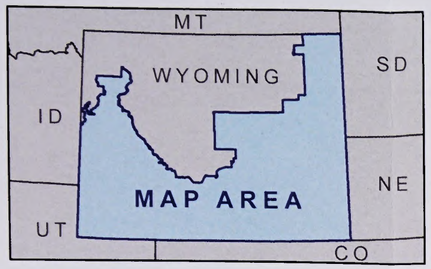
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-8: Proposed Plan
Oil and Gas Leasing Restrictions Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- Closed to Oil and Gas Leasing
- No Surface Occupancy
- Controlled Surface Use
- Federal Oil and Gas Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

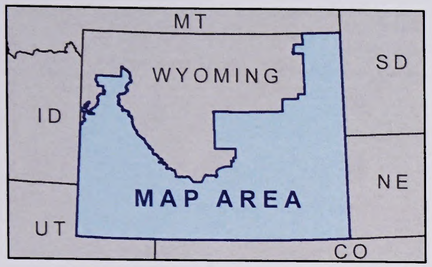
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-9: Alternative A
Right-of-Way Exclusion and Avoidance Areas
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Right-of-Way Avoidance Areas
- Right-of-Way Exclusion Areas
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

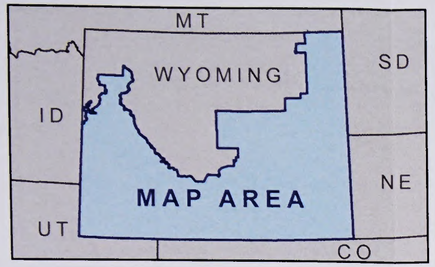
Note: Identified restrictions displayed on this map represent the existing management actions across Greater Sage Grouse Habitat only.

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Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-10: Alternative B
Right-of-Way Exclusion and Avoidance Areas
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Right-of-Way Avoidance Areas
- Right-of-Way Exclusion Areas
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

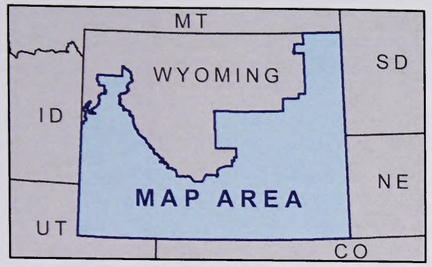
0 20 40 60 80
Miles

Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-11: Alternative C
Right-of-Way Exclusion and Avoidance Areas
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Right-of-Way Avoidance Areas
- Right-of-Way Exclusion Areas
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

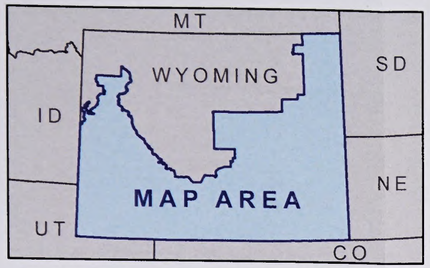
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Kemmerer Field Office
Rock Springs Field Office
Kemmerer
Rock Springs
Green River
Evanston
Rawlins
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-12: Alternative D
Right-of-Way Exclusion and Avoidance Areas
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Right-of-Way Exclusion Areas
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

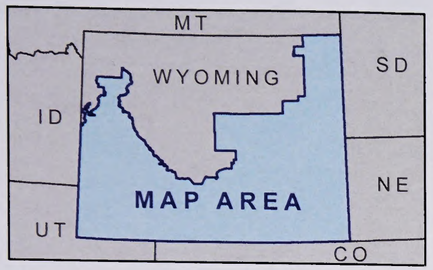
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-13: Proposed Plan
Right-of-Way Exclusion and Avoidance Areas
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Areas (Core)
- USFS Proposed Priority Habitat Management Areas (Connectivity)
- Right-of-Way Avoidance Areas
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

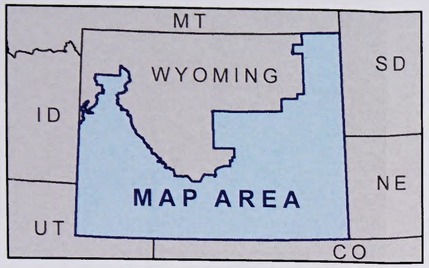
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-14: Alternative A
Areas Closed to Mineral Material Disposal
Related to Greater Sage Grouse Habitat



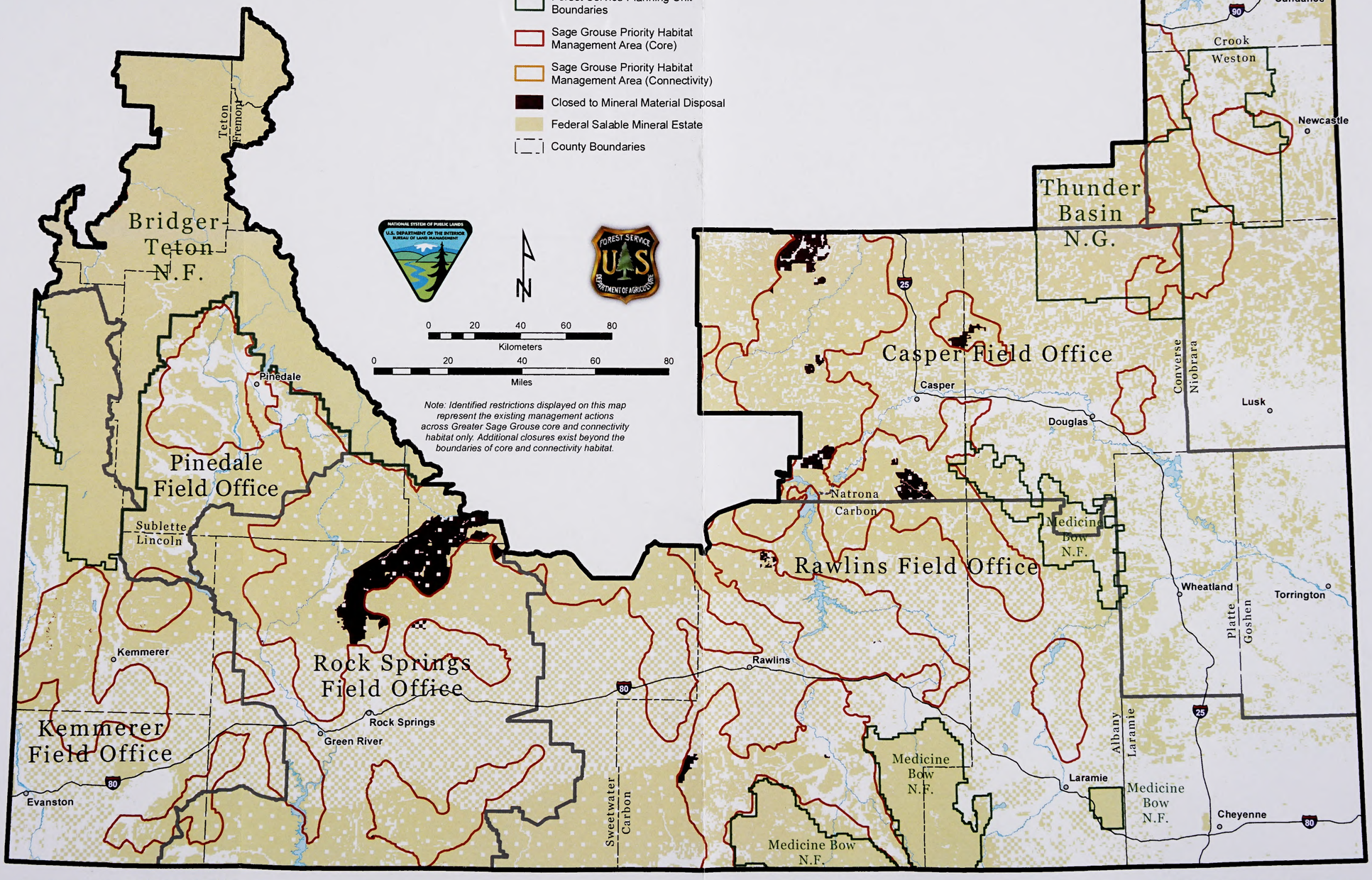
- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Mineral Material Disposal
- Federal Salable Mineral Estate
- County Boundaries

N

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

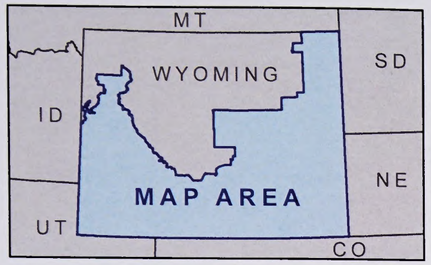
Note: Identified restrictions displayed on this map represent the existing management actions across Greater Sage Grouse core and connectivity habitat only. Additional closures exist beyond the boundaries of core and connectivity habitat.



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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-15: Alternative B
Areas Closed to Mineral Material Disposal
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Mineral Material Disposal
- Federal Salable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

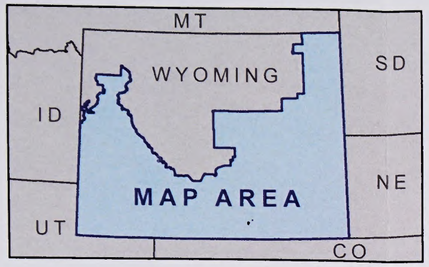
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-16: Alternative C
Areas Closed to Mineral Material Disposal
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Mineral Material Disposal
- Federal Salable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

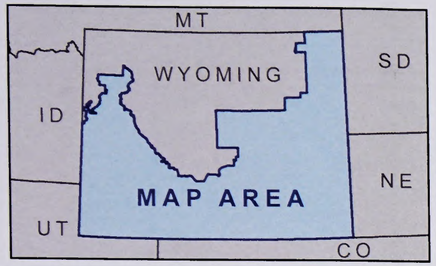
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow N.F.
Wheatland
Platte
Goshen
Torrington
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-17: Alternative D
Areas Closed to Mineral Material Disposal
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Mineral Material Disposal
- Federal Salable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

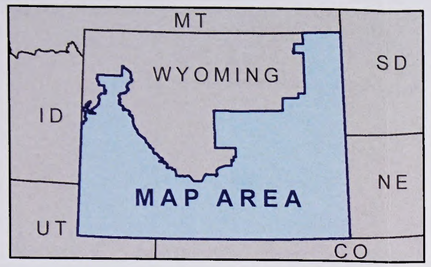
Note. Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Converse
Niobrara
Lusk
Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.
Albany
Laramie
Laramie
Wheatland
Platte
Goshen
Torrington
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-18: Proposed Plan
Areas Closed to Mineral Material Disposal
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- Closed to Mineral Material Disposal
- Federal Salable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

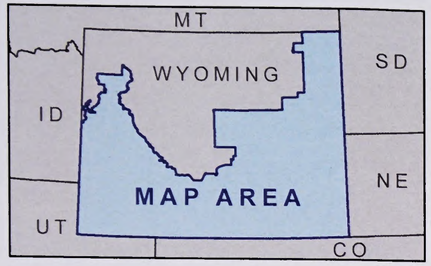
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington
80
90
25

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-19: Alternative A
Areas Withdrawn from Mineral Entry
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Withdrawn from Mineral Entry
- Recommended for Withdrawal from Mineral Entry
- Federal Locatable Mineral Estate
- County Boundaries

N

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

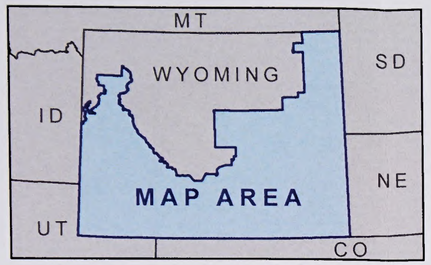
Note: Identified restrictions displayed on this map represent the existing management actions across Greater Sage Grouse core and connectivity habitat only. Additional restrictions exist beyond the boundaries of core and connectivity habitat.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Sweetwater
Carbon
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Rawlins
Kemmerer Field Office
Evanston

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-20: Alternative B
Areas Withdrawn from Mineral Entry
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Withdrawn from Mineral Entry
- Recommended for Withdrawal from Mineral Entry
- Federal Locatable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

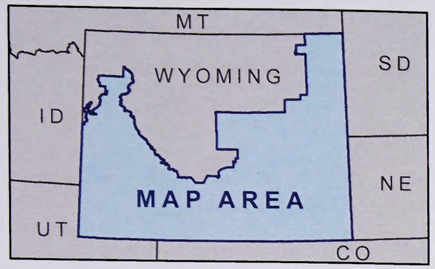
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Albany
Laramie
Laramie
Wheatland
Torrington
Platte
Goshen
Cheyenne

Wyoming Sage Grouse Land Use Plan Amendments
Final Environmental Impact Statement - May 2015

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-21: Alternative C
Areas Withdrawn from Mineral Entry
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Withdrawn from Mineral Entry
- Recommended for Withdrawal from Mineral Entry
- Federal Locatable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

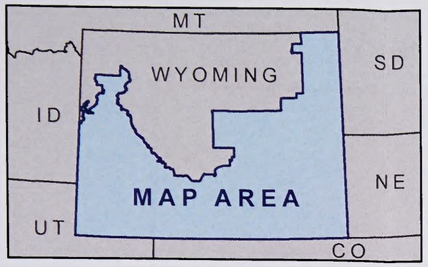
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Rawlins
Rawlins Field Office
Sweetwater
Carbon
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-22: Alternative D
Areas Withdrawn from Mineral Entry
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Withdrawn from Mineral Entry
- Recommended for Withdrawal from Mineral Entry
- Federal Locatable Mineral Estate
- County Boundaries

N

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

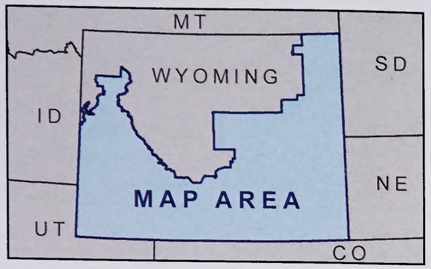
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Rock Springs
Green River
Evanston
80
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
90
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Cheyenne
Wheatland
Torrington
Platte
Goshen
25

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-23: Proposed Plan
Areas Withdrawn from Mineral Entry
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- Withdrawn from Mineral Entry
- Recommended for Withdrawal from Mineral Entry
- Considered for Proposed Withdrawal from Mineral Entry
- Federal Locatable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

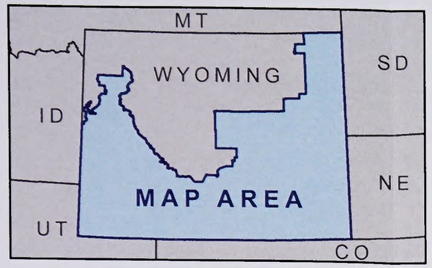
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Rawlins Field Office
Natrona
Carbon
Rawlins
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 2-24: Alternative A
Areas Closed to Non-Energy Leasable Minerals
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Leasing of Non-Energy Leasable Minerals
- Federal Non-Energy Leasable Mineral Estate
- County Boundaries

N

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

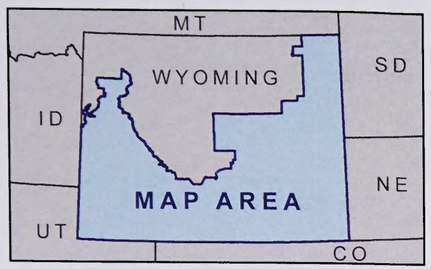
Note: Identified restrictions displayed on this map represent the existing management actions across Greater Sage Grouse core and connectivity habitat only. Additional restrictions exist beyond the boundaries of core and connectivity habitat.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-25: Alternative B
Areas Closed to Non-Energy Leasable Minerals
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Leasing of Non-Energy Leasable Minerals
- Federal Non-Energy Leasable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

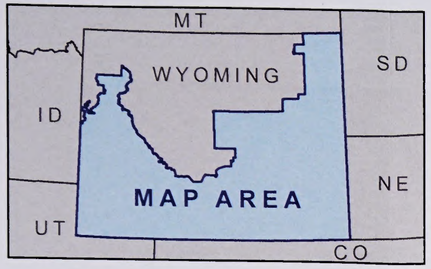
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow N.F.
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-26: Alternative C
Areas Closed to Non-Energy Leasable Minerals
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Leasing of Non-Energy Leasable Minerals
- Federal Non-Energy Leasable Mineral Estate
- County Boundaries

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FOREST SERVICE
U.S.
DEPARTMENT OF AGRICULTURE

0 20 40 60 80
Kilometers

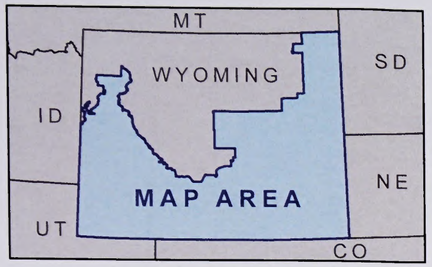
0 20 40 60 80
Miles

Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-27: Alternative D
Areas Closed to Non-Energy Leasable Minerals
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Closed to Leasing of Non-Energy Leasable Minerals
- Federal Non-Energy Leasable Mineral Estate
- County Boundaries

N

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

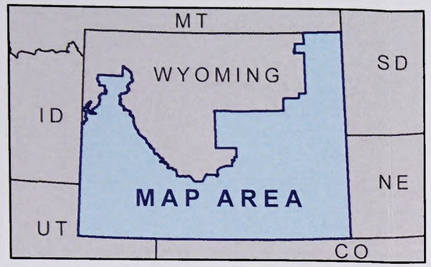
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Rock Springs Field Office
Rock Springs
Green River
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Rawlins Field Office
Natrona
Carbon
Rawlins
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-28: Proposed Plan
Areas Closed to Non-Energy Leasable Minerals
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- Closed to Leasing of Non-Energy Leasable Minerals
- Federal Non-Energy Leasable Mineral Estate
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

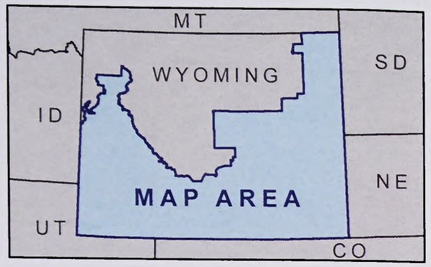
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Converse
Niobrara
Lusk
Casper
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Cheyenne
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-29: Alternative A
Wind Energy Development Restrictions
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Wind Energy Exclusion Area
- Wind Energy Avoidance Area
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

Note: Identified restrictions displayed on this map represent the existing management actions across Greater Sage Grouse core and connectivity habitat only.

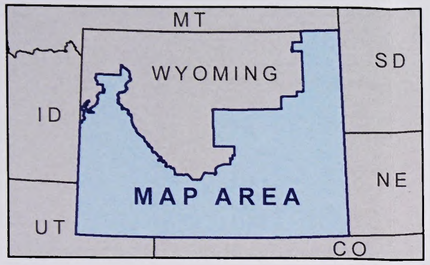
Bridger Teton N.F.
Teton
Fremont
Pinedale
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Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
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Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Converse
Niobrara
Lusk
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne
80
25
90

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-30: Alternative B
Wind Energy Development Restrictions
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Wind Energy Exclusion Area
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

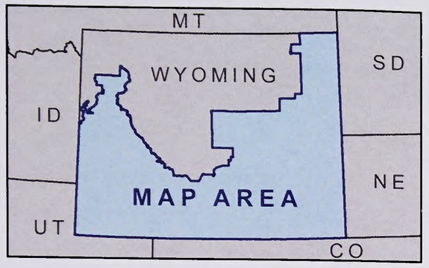
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Carbon
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-31: Alternative C
Wind Energy Development Restrictions
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Wind Energy Exclusion Area
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

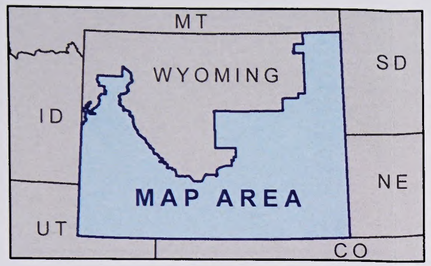
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Evanston
Rawlins
Casper Field Office
Casper
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-32: Alternative D
Wind Energy Development Restrictions
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- Wind Energy Exclusion Area
- Wind Energy Avoidance Area
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

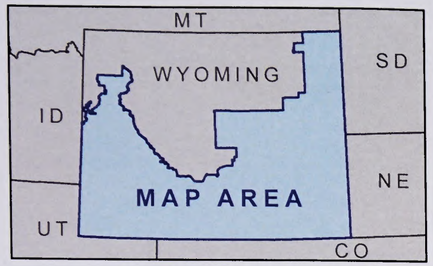
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs
Rock Springs Field Office
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-33: Proposed Plan
Wind Energy Development Restrictions
Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- USFS Proposed Priority Habitat Management Area (Core)
- Wind Energy Exclusion Area
- Wind Energy Avoidance Area
- BLM and USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

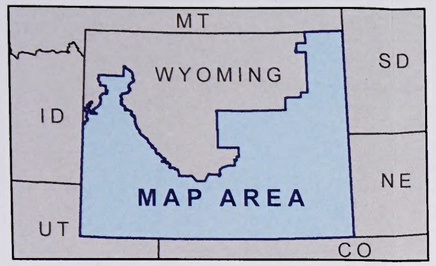
Note: Identified restrictions displayed on this map are in addition to existing restrictions already approved through previous planning efforts.

Bridger-Teton N.F.
Teton
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Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-34: Alternative B
Areas of Critical Environmental Concern and Special Interest Areas Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- BLM and USFS Surface Management
- Areas of Critical Environmental Concern and Special Interest Areas
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

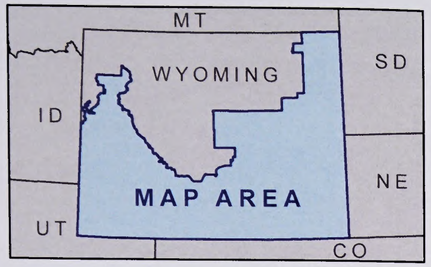
Note: Identified designations displayed on this map are in addition to existing designations already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-35: Alternative C
Areas of Critical Environmental Concern and Special Interest Areas Related to Greater Sage Grouse Habitat



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- BLM and USFS Surface Management
- Areas of Critical Environmental Concern and Special Interest Areas
- County Boundaries

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

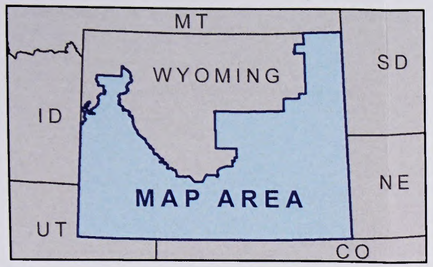
Note: Identified designations displayed on this map are in addition to existing designations already approved through previous planning efforts.

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 2-36: Proposed Plan
Sagebrush Focal Areas and
Sage Grouse Habitat Classifications
on BLM & USFS Managed Lands



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sagebrush Focal Areas

BLM/USFS Surface by Sage Grouse Habitat Type

- Priority Habitat Management Area (Core)
- Priority Habitat Management Area (Connectivity)
- General Habitat Management Area
- USFS Proposed Priority Habitat Management Area (Core)
- USFS Proposed Priority Habitat Management Area (Connectivity)
- Non Sage Grouse Habitat

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

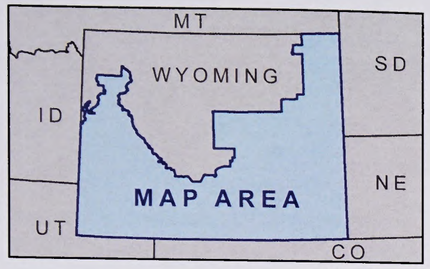
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Torrington
Platte
Goshen

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-1: Historic Sites and National Historic Trails



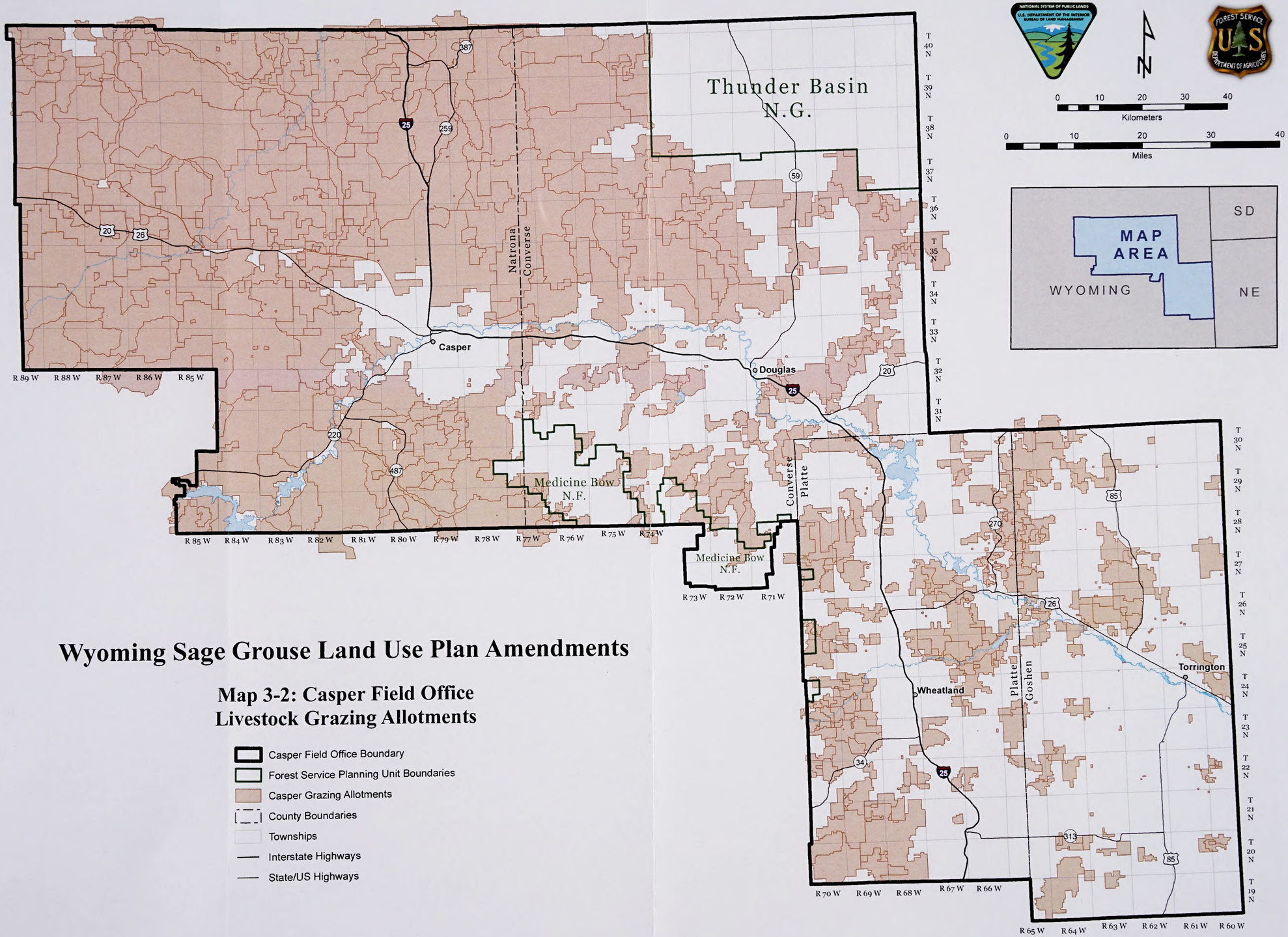
- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Historic Sites
- Historic Site Areas
- National Historic Trails
- Other Historic Trails
- BLM & USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
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Thunder Basin N.G.
Newcastle Field Office
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Casper Field Office
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Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Laramie
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

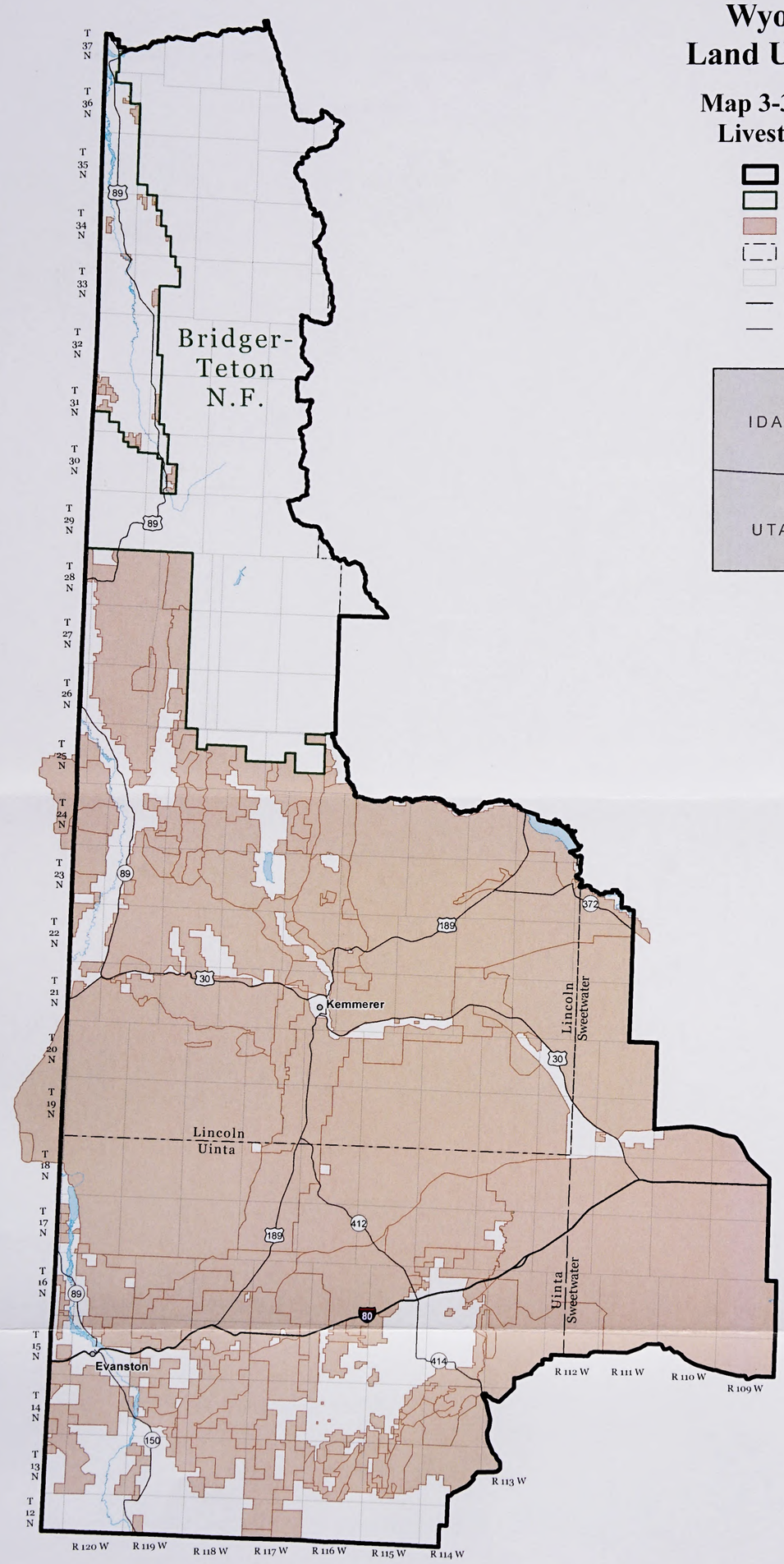
Map 3-2: Casper Field Office Livestock Grazing Allotments

- Casper Field Office Boundary
- Forest Service Planning Unit Boundaries
- Casper Grazing Allotments
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways

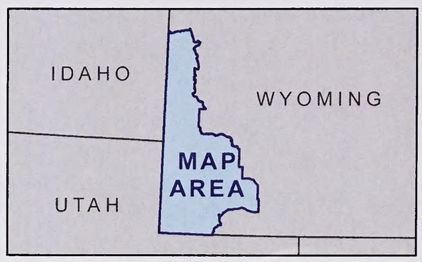
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

Wyoming Sage Grouse Land Use Plan Amendments

Map 3-3: Kemmerer Field Office Livestock Grazing Allotments



- Kemmerer Field Office Boundary
- Forest Service Planning Unit Boundaries
- Kemmerer Grazing Allotments
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways









0 10 20 30 40
Kilometers

0 10 20 30 40
Miles

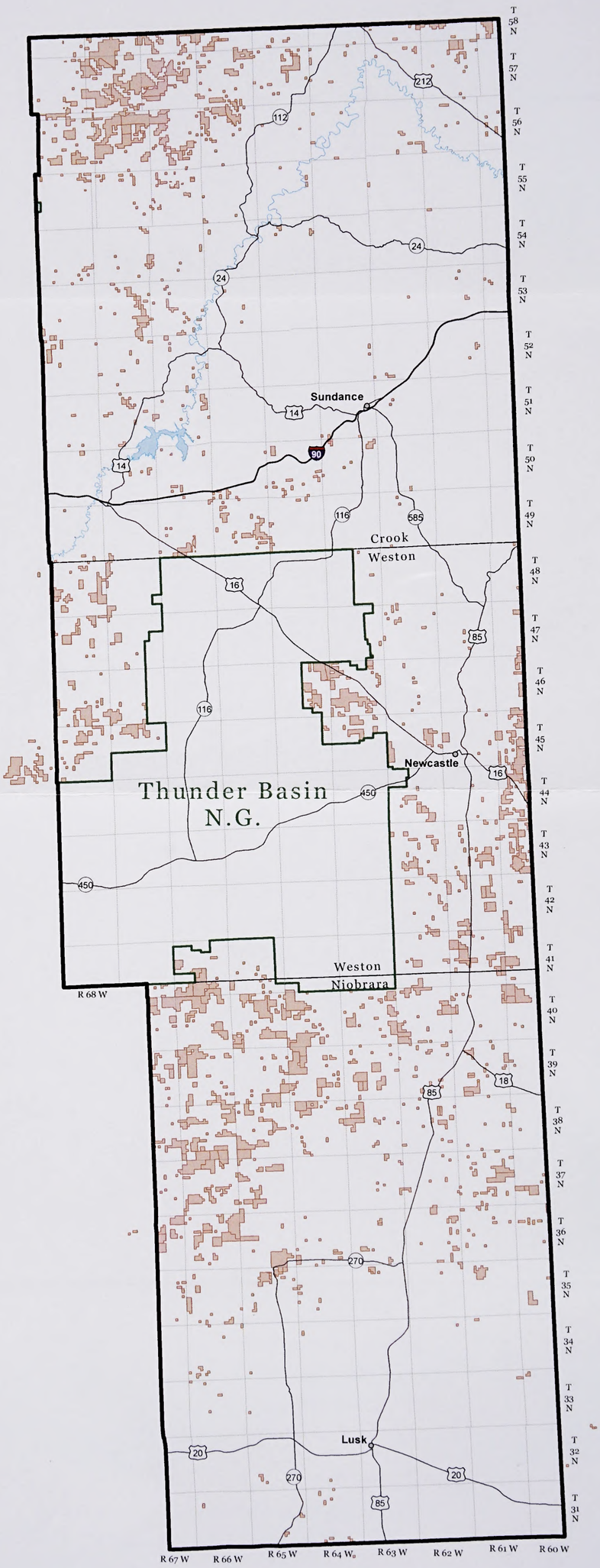
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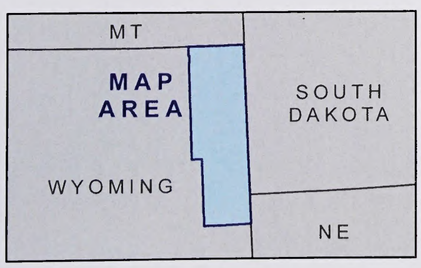
Wyoming Sage Grouse Land Use Plan Amendments

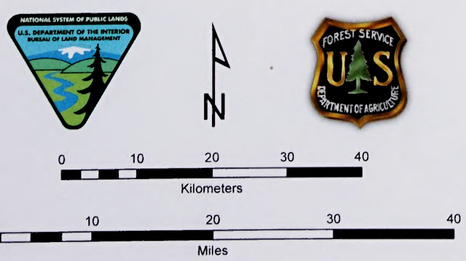
Map 3-4: Newcastle Field Office Livestock Grazing Allotments

- Newcastle Field Office Boundary
- Forest Service Planning Unit Boundaries
- Newcastle Grazing Allotments
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

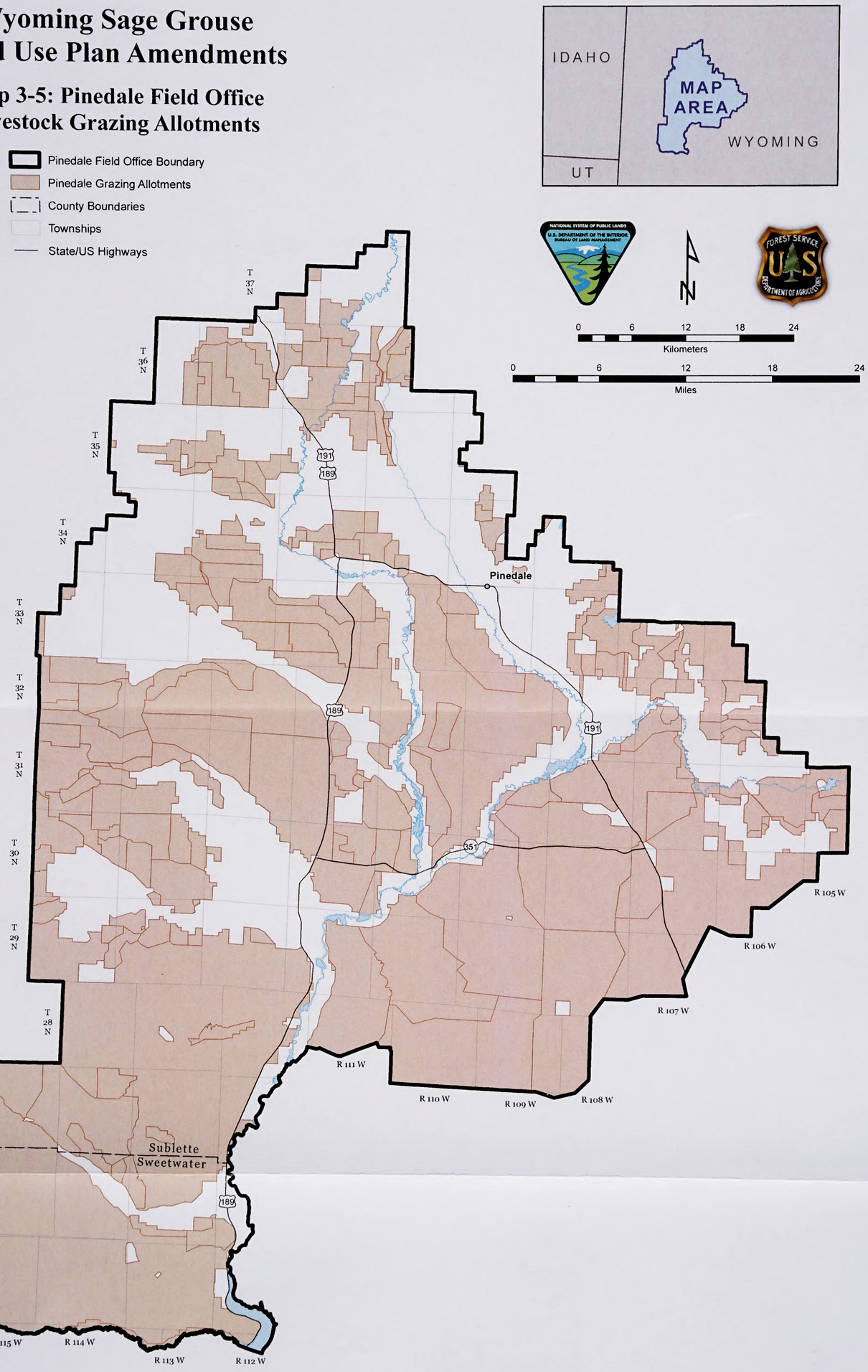






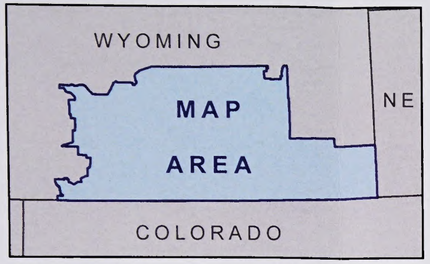
Wyoming Sage Grouse Land Use Plan Amendments

Map 3-5: Pinedale Field Office Livestock Grazing Allotments



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Wyoming Sage Grouse Land Use Plan Amendments



Map 3-6: Rawlins Field Office
Livestock Grazing Allotments

- Rawlins Field Office Boundary
- Forest Service Planning Unit Boundaries
- Rawlins Grazing Allotments
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways

N

0 10 20 30 40
Kilometers

0 10 20 30 40
Miles

Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.
Rawlins
Laramie
Cheyenne
Sweetwater
Carbon
Carbon
Albany
Albany
Laramie

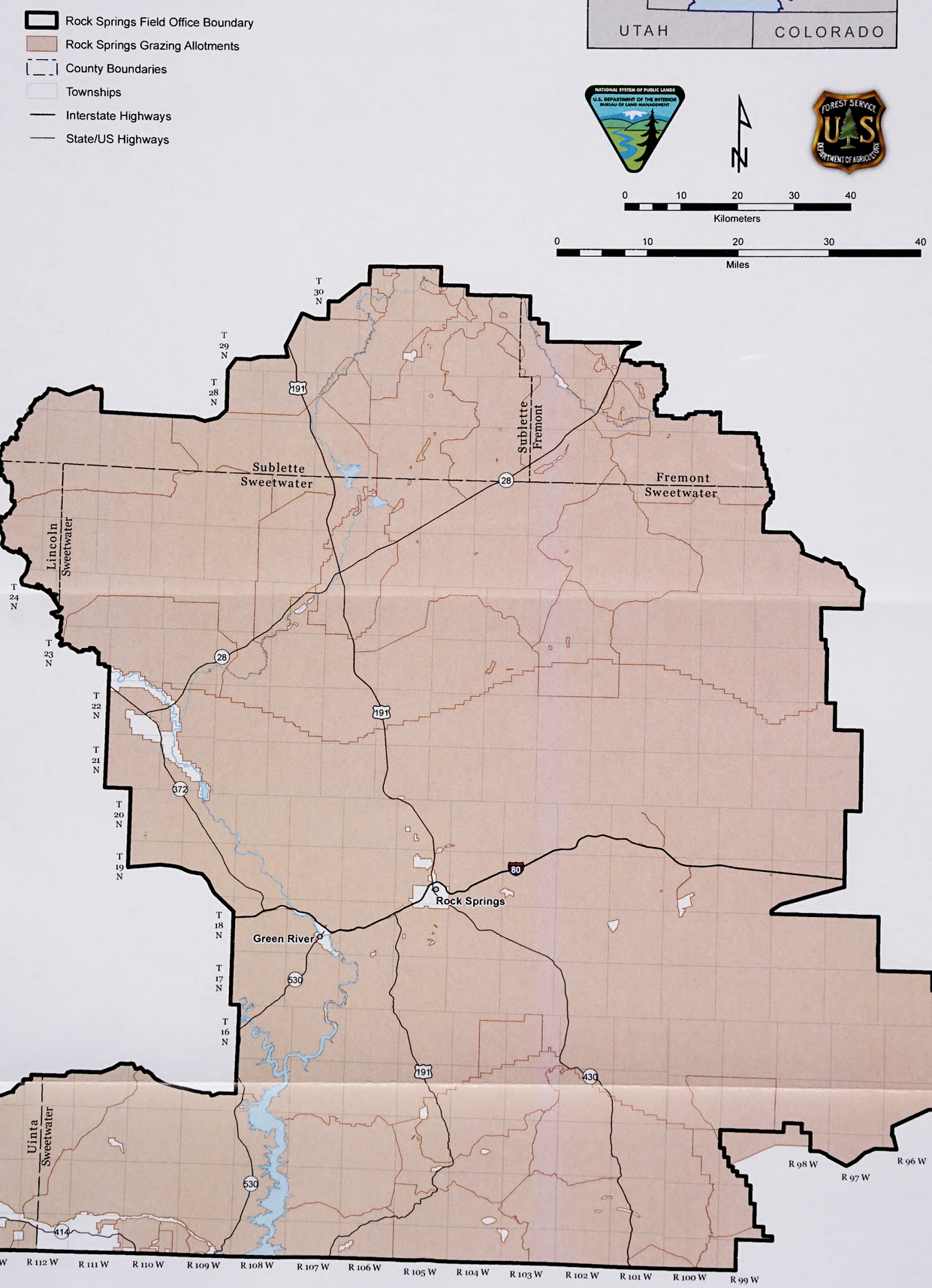
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T 15 N
T 14 N
T 13 N
T 12 N

R 99 W R 98 W R 97 W R 96 W R 95 W R 94 W R 93 W R 92 W R 91 W R 90 W R 89 W R 88 W R 87 W R 86 W R 85 W R 84 W R 83 W R 82 W R 81 W R 80 W R 79 W R 78 W R 77 W R 76 W R 75 W R 74 W R 73 W R 72 W R 71 W R 70 W R 69 W R 68 W R 67 W R 66 W R 65 W R 64 W R 63 W R 62 W R 61 W R 60 W

NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

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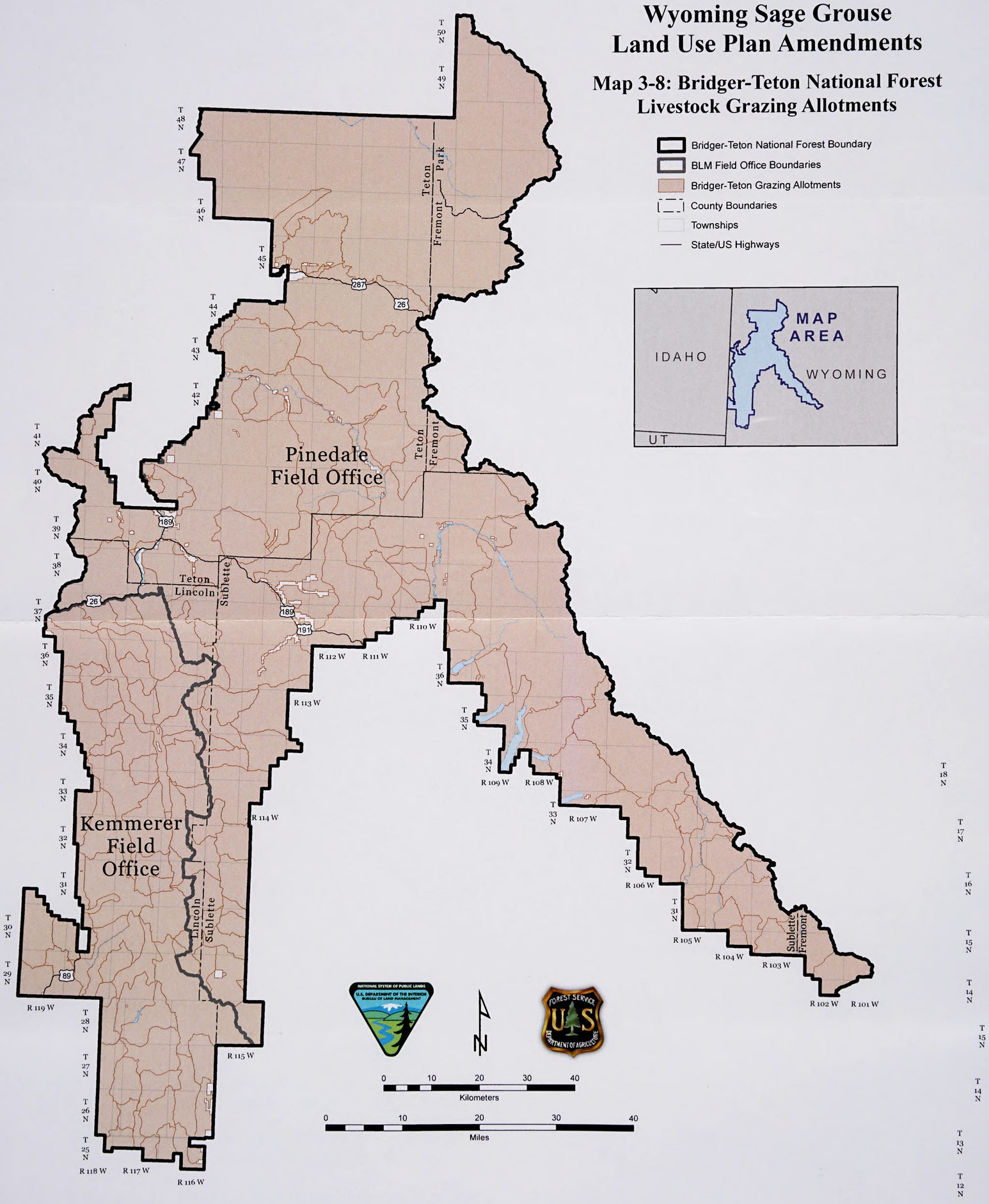
Map 3-7: Rock Springs Field Office Livestock Grazing Allotments



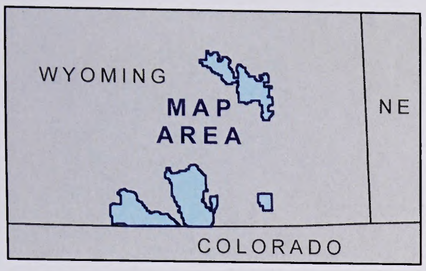
NO WARRANTY IS MADE BY THE BUREAU OF LAND MANAGEMENT FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM.

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Map 3-8: Bridger-Teton National Forest Livestock Grazing Allotments

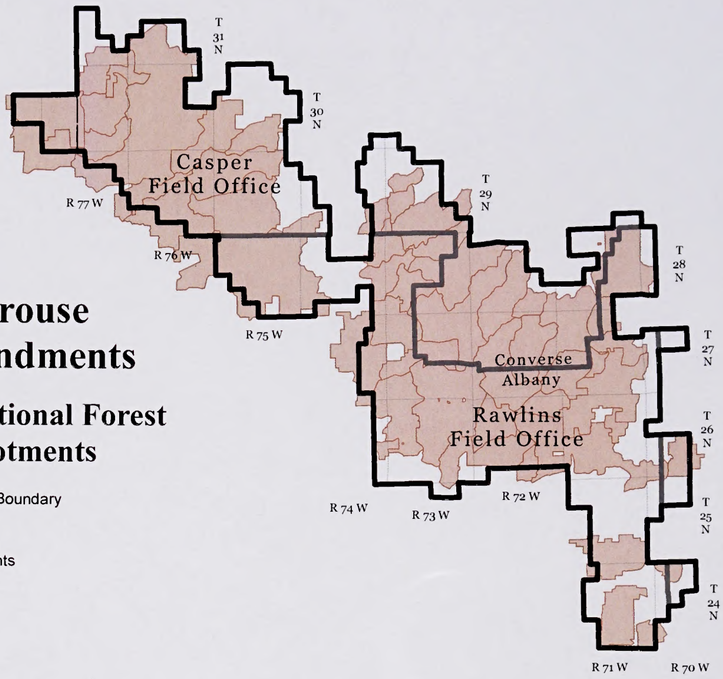


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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-9: Medicine Bow National Forest Livestock Grazing Allotments

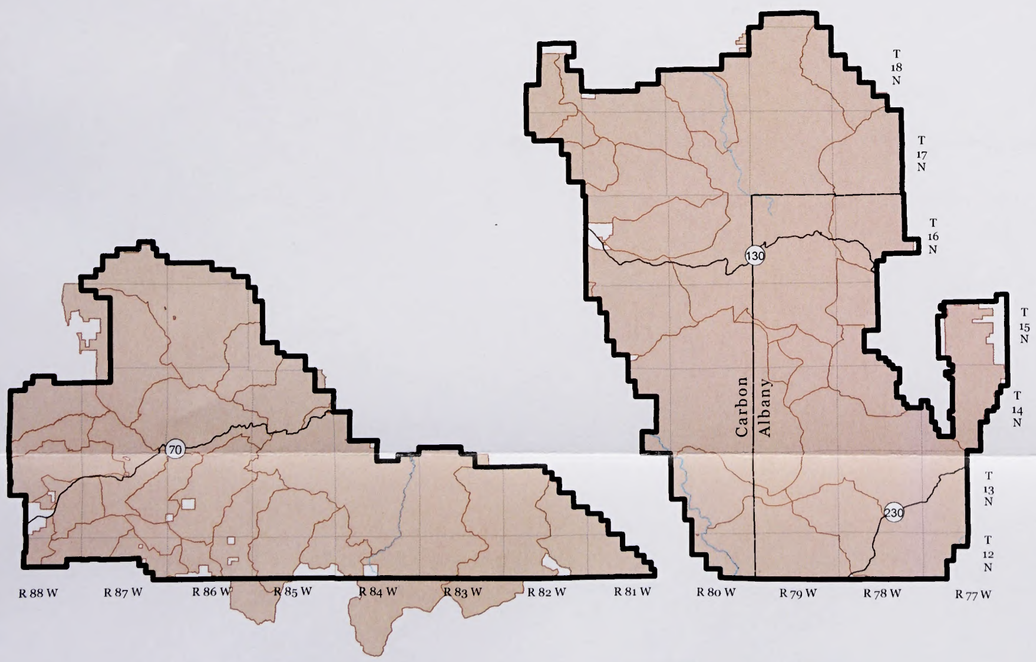


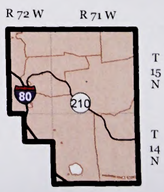
- Medicine Bow National Forest Boundary
- BLM Field Office Boundaries
- Medicine Bow Grazing Allotments
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways

N

0 10 20 30 40
Kilometers

0 10 20 30 40
Miles

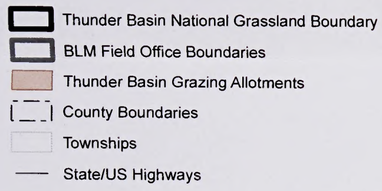


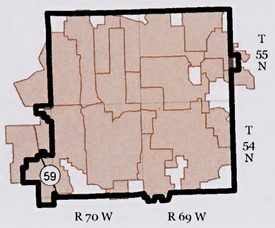


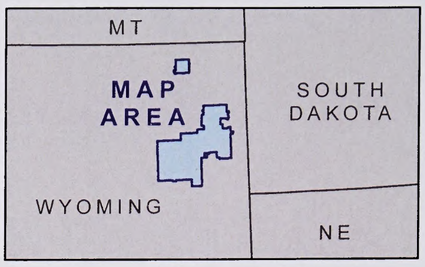
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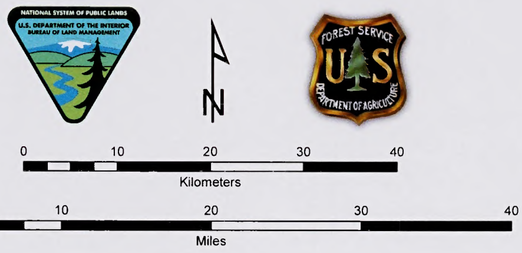
Wyoming Sage Grouse Land Use Plan Amendments

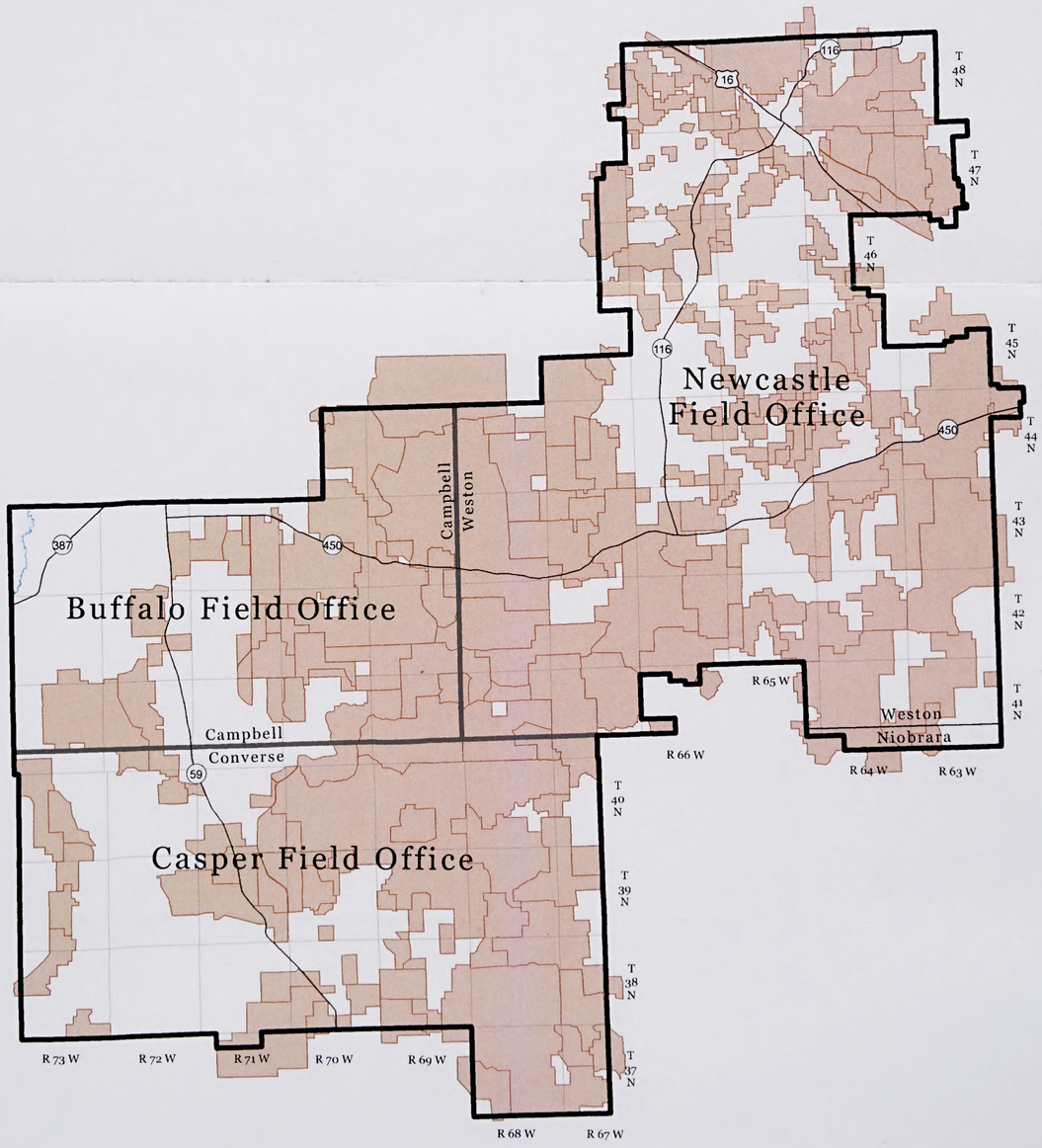
Map 3-10: Thunder Basin National Grassland Livestock Grazing Allotments







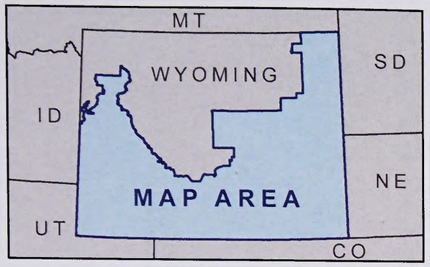




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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-11: Federal Mineral Estate and Existing Oil and Gas Leases



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Existing Federal Oil and Gas Leases
- Federal Mineral Estate
- County Boundaries

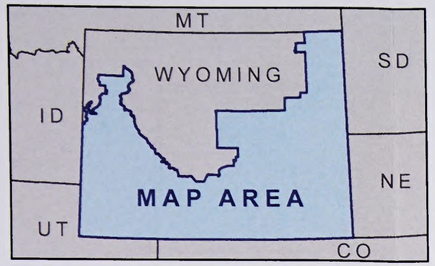
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Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-12: Major Oil and Gas Fields



- LUP Amendments Planning Area Boundary
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Oil and Gas Fields
- Coal Bed Methane Fields
- Federal Mineral Estate
- County Boundaries

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper
Casper Field Office
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
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Wheatland
Torrington
Platte
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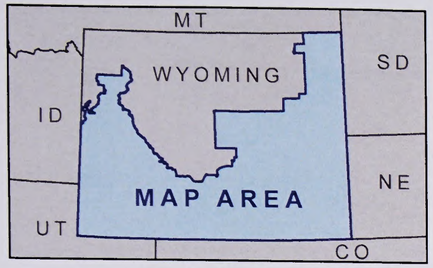
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Kilometers

0 20 40 60 80
Miles

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-13: Coal and Trona Leasing



LUP Amendments Planning Area Boundary
BLM Field Office Boundaries
Forest Service Planning Unit Boundaries
Active Coal Leases
Known Trona Leasing Area
Federal Mineral Estate
County Boundaries

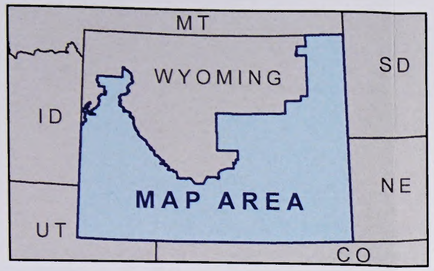
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper
Casper Field Office
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Albany
Laramie
Laramie
Wheatland
Torrington
Platte
Goshen
Cheyenne

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-14: Developed Recreation Sites and Management Areas



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Developed Recreation Sites
- BLM Special Recreation Management Areas
- USFS Recreation Management Areas
- Other BLM/USFS Recreation Areas
- BLM & USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

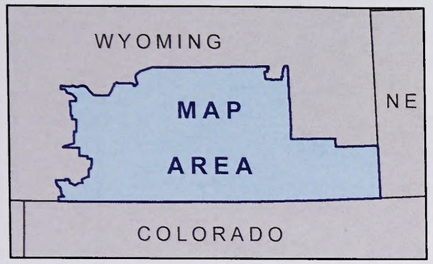
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Miles

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

Wyoming Sage Grouse Land Use Plan Amendments
Final Environmental Impact Statement - May 2015

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Wyoming Sage Grouse Land Use Plan Amendments



Map 3-15: Rawlins Field Office
Soils / Precipitation Zones

- Rawlins Field Office Boundary
- Forest Service Planning Unit Boundaries
- Basin Soils (7 - 9 in. Precip. Zone)
- High Elevation Soils (15 - 19 in. Precip. Zone)
- Mid-Elevation Soils (10 - 14 in. Precip. Zone)
- Lower Elevation Soils (15 - 17 in. Precip. Zone)
- Stabilized Dunes (10 - 14 in. Precipitation Zone)
- County Boundaries
- Townships
- Interstate Highways
- State/US Highways

N

0 10 20 30 40
Kilometers

0 10 20 30 40
Miles

Medicine Bow N.F.
Sweetwater
Carbon
Rawlins
Albany
Laramie
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.
Medicine Bow N.F.

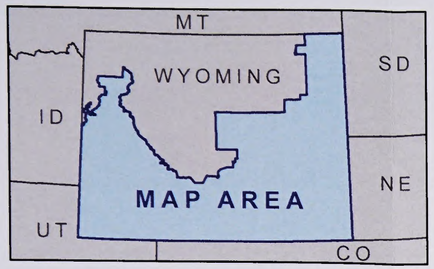
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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-16: BLM Special Designations and Management Areas



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Suitable Wild & Scenic Rivers
- Wilderness Study Areas (WSA)
- Areas of Critical Environmental Concern (ACEC)
- Other Management Areas (OMA)
- BLM & USFS Surface Management
- County Boundaries

N

0 20 40 60 80
Kilometers

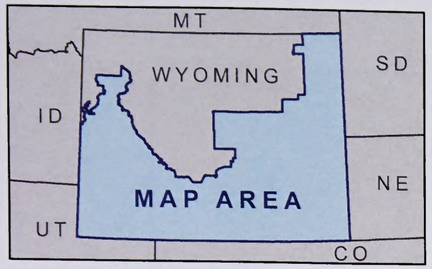
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Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-17: USFS Special Designation Areas



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Designated Wild & Scenic Rivers
- Designated Wilderness
- Wilderness Study Areas
- Sheep Mountain National Game Refuge
- Wyoming Range Withdrawal Area
- Research Natural Areas
- Special Interest Areas
- Inventoried Roadless Areas
- BLM & USFS Surface Management
- County Boundaries

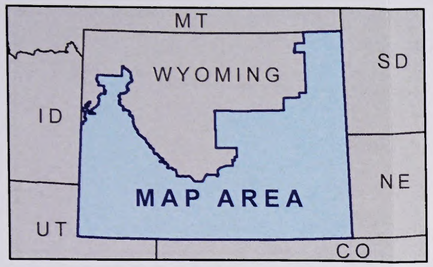
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Kilometers
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Miles

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Converse
Niobrara
Lusk
Casper
Douglas
Natrona
Carbon
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Medicine Bow N.F.
Cheyenne
Rawlins Field Office
Rawlins
Sweetwater
Carbon
Rock Springs Field Office
Kemmerer
Rock Springs
Green River
Kemmerer Field Office
Evanston
Sublette
Lincoln
Pinedale Field Office
Pinedale
Bridger-Teton N.F.
Teton
Fremont

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-18: Greater Sage Grouse Habitat and Sub-Populations



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Greater Sage Grouse Leks
- Jackson Hole Sub-Population
- Laramie Sub-Population
- Powder River Sub-Population
- Wyoming Basin Sub-Population

BLM/USFS Surface by Sage Grouse Habitat Type

- Priority Habitat Management Area (Core)
- Priority Habitat Management Area (Connectivity)
- General Habitat Management Area
- Non Sage Grouse Habitat
- County Boundaries

0 20 40 60 80
Kilometers

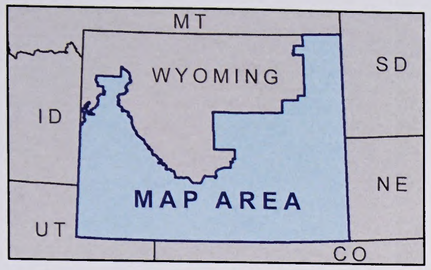
0 20 40 60 80
Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
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Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
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Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
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Medicine Bow N.F.
Cheyenne
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Wheatland
Platte
Goshen
Torrington
Thunder Basin N.G.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-20:Transportation System



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Interstate Highways
- State/US Highways
- County Roads
- BLM Roads
- Forest Service Roads
- Railroads
- BLM & USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

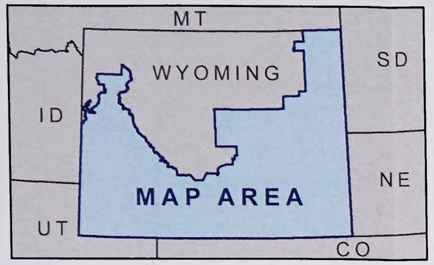
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Miles

Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Rock Springs
Green River
Kemmerer Field Office
Evanston
80
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper
Casper Field Office
Douglas
25
Thunder Basin N.G.
Newcastle Field Office
Sundance
50
Crook
Weston
Newcastle
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow
Cheyenne
Wheatland
Torrington
Platte
Goshen

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-21: Vegetation Communities



LUP Amendments Planning Area
BLM Field Office Boundaries
Forest Service Planning Unit Boundaries
County Boundaries

Vegetation Zones

Agriculture/Urban
Barren Land
Forests
Grasslands
Sand
Shrublands
Wetland/Riparian
Woodlands

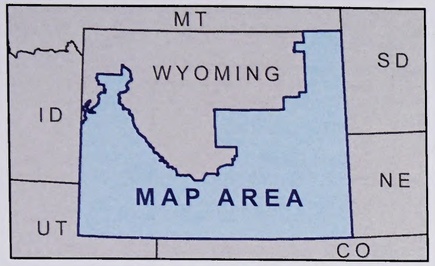
0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

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Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger-Teton N.F.
Beaver
Fremont
Pinedale
Pinedale Field Office
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Sublette
Lincoln
Rock Springs Field Office
Rawlins Field Office
Wheatland
Torrington
Platte
Goshen
Kemmerer
Rawlins
Rock Springs
Green River
Kemmerer Field Office
Albany
Laramie
Evanston
Sweetwater
Carbon
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-22: BLM Visual Resource Management Classifications



LUP Amendments Planning Area
BLM Field Office Boundaries
Forest Service Planning Unit Boundaries
County Boundaries

BLM Surface Management by VRM Class

VRM Class I
VRM Class II
VRM Class III
VRM Class IV

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Natrona
Carbon
Rawlins
Rawlins Field Office
Medicine Bow N.F.
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington
25
80
90

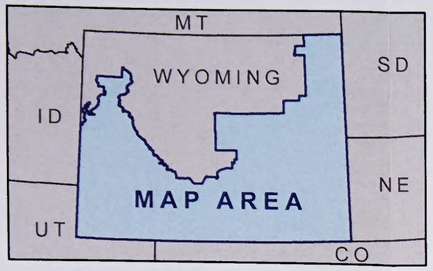
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Kilometers
0 20 40 60 80
Miles

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-23: USFS Scenic Integrity Objectives and Visual Quality Objectives



Medicine Bow N.F. & Thunder Basin N.G. Scenic Integrity Objectives

- Very High
- High
- Moderate
- Low

Bridger Teton N.F. Visual Quality Objectives

- Preservation
- Retention
- Partial Retention
- Modification
- Maximum Modification

- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries

0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

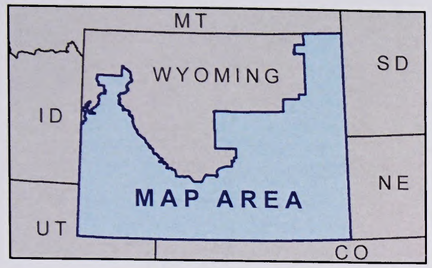
Bridger-Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper
Casper Field Office
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Wheatland
Platte
Goshen
Torrington

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-24: Watersheds and Surface Water Features



LUP Amendments Planning Area
BLM Field Office Boundaries
Forest Service Planning Unit Boundaries
County Boundaries
Major Rivers and Streams

Watersheds

- Bear River
- Big Horn River
- Cheyenne River
- Great Divide-Upper Green River
- Great Salt Lake
- Little Missouri River
- Niobrara River
- North Platte River
- Powder-Tongue Rivers
- South Platte River
- Upper Snake River
- Upper Yellowstone River
- White-Yampa Rivers

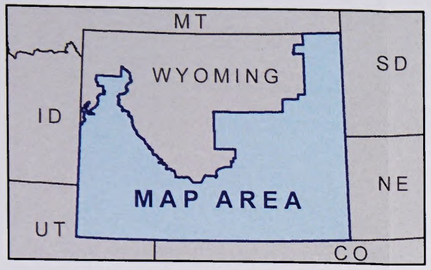
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Kilometers
0 20 40 60 80
Miles

Thunder Basin N.G.
Newcastle Field Office
Sundance
90
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Casper Field Office
25
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Sublette
Lincoln
Wheatland
Torrington
Platte
Goshen
Rawlins Field Office
Rock Springs Field Office
Kemmerer
Rawlins
80
Rock Springs
Green River
Albany
Laramie
Kemmerer Field Office
Evanston
Sweetwater
Carbon
Medicine Bow N.F.
Laramie
Medicine Bow N.F.
Cheyenne
80

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-25: Wild Horse Herd Management Areas



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Herd Management Areas
- Inactive Herd Management Areas
- BLM & USFS Surface Management
- County Boundaries

0 20 40 60 80
Kilometers

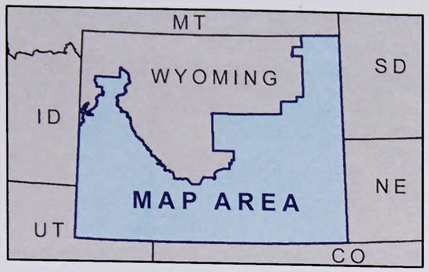
0 20 40 60 80
Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Desert Wild
LaBarge
Sublette
Lincoln
Little Colorado
Antelope Hills
Stewart Creek
Lost Creek
Divide Basin
Rock Springs Field Office
White Mountain
Kemmerer
Rock Springs
Green River
Salt Wells Creek
Adobe Town
Sweetwater
Carbon
Kemmerer Field Office
Evanston
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-26: Pronghorn Antelope Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Parturition Areas
- Crucial Severe Winter Relief
- Crucial Winter Range
- Crucial Winter/Yearlong
- Spring/Summer/Fall
- Severe Winter Relief
- Winter
- Winter/Yearlong
- Yearlong

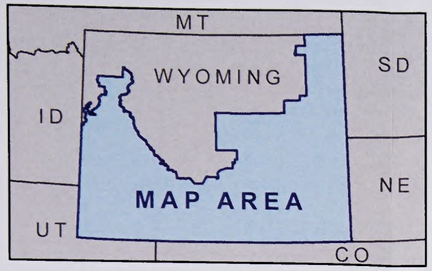
0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Medicine Bow N.F.
Rawlins
Rawlins Field Office
Natrona
Carbon
Casper
Casper Field Office
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Converse
Niobrara
Lusk
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
80
25
90

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-27: Mule Deer Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Parturition Areas
- Crucial Winter Range
- Crucial Winter/Yearlong
- Spring/Summer/Fall
- Severe Winter Relief
- Winter
- Winter/Yearlong
- Yearlong

N

0 20 40 60 80
Kilometers

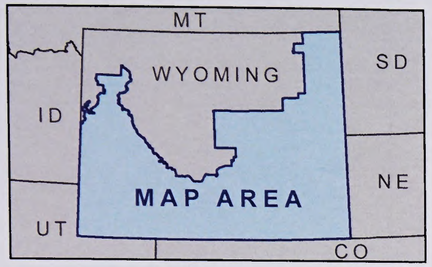
0 20 40 60 80
Miles

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-28: White-tailed Deer Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Crucial Winter Range
- Crucial Winter/Yearlong
- Spring/Summer/Fall
- Winter/Yearlong
- Yearlong

N

0 20 40 60 80
Kilometers

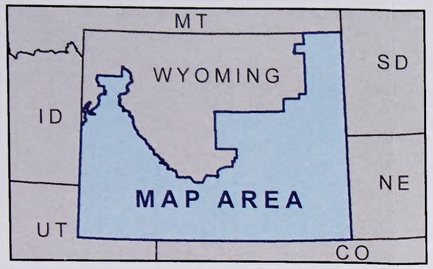
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Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Casper
Casper Field Office
Douglas
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Converse
Niobrara
Lusk
Medicine Bow N.F.
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Wheatland
Platte
Goshen
Torrington
25
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90

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-29: Elk Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Parturition Areas
- Crucial Severe Winter Relief
- Crucial Winter Range
- Crucial Winter/Yearlong
- Spring/Summer/Fall
- Severe Winter Relief
- Winter
- Winter/Yearlong
- Yearlong

N

0 20 40 60 80
Kilometers

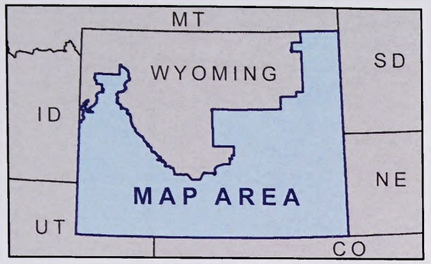
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Miles

Bridger Teton N.F.
Teton
Fremont
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-30: Moose Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Parturition Areas
- Crucial Winter Range
- Crucial Winter/Yearlong
- Crucial Yearlong
- Spring/Summer/Fall
- Winter
- Winter/Yearlong
- Yearlong

0 20 40 60 80
Kilometers

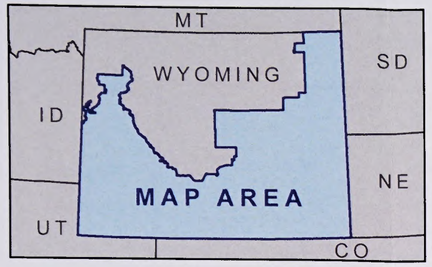
0 20 40 60 80
Miles

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Teton
Fremont
Bridger-Teton N.F.
Pinedale
Pinedale Field Office
Sublette
Lincoln
Kemmerer
Rock Springs Field Office
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
Natrona
Carbon
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-31: Bighorn Sheep Habitat



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- County Boundaries
- Parturition Areas
- Crucial Winter Range
- Crucial Winter/Yearlong
- Spring/Summer/Fall
- Winter
- Winter/Yearlong
- Yearlong

N

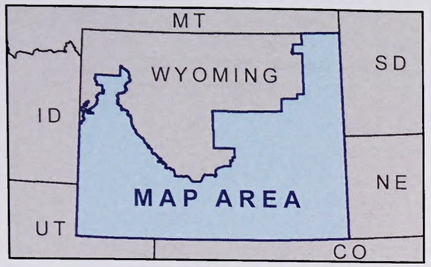
0 20 40 60 80
Kilometers

0 20 40 60 80
Miles

Bridger-Teton N.F.
Teton
Fremont
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Pinedale Field Office
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Lincoln
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs Field Office
Rock Springs
Green River
Sweetwater
Carbon
Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Casper
Converse
Niobrara
Lusk
Douglas
Natrona
Carbon
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Medicine Bow N.F.

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Wyoming Sage Grouse Land Use Plan Amendments



Map 3-32: FSIM Fire Probabililty Categories

- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Sage Grouse Priority Habitat Management Area (Core)
- Sage Grouse Priority Habitat Management Area (Connectivity)
- County Boundaries

FSIM Fire Probability Categories

- Zero
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 9

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

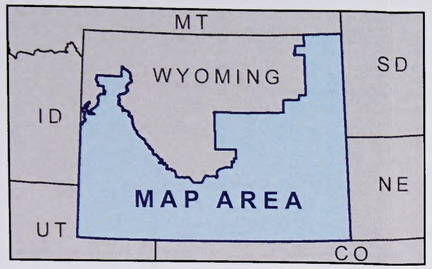
Note: This map displays fire probability classes across Greater Sage Grouse priority and general habitat management areas only.

Thunder Basin N.G.
Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Casper Field Office
Converse
Niobrara
Lusk
Casper
Douglas
Natrona
Carbon
Medicine Bow N.F.
Wheatland
Torrington
Platte
Goshen
Albany
Laramie
Laramie
Medicine Bow N.F.
Cheyenne
Medicine Bow N.F.
Rawlins Field Office
Rawlins
Rock Springs
Green River
Rock Springs Field Office
Sweetwater
Carbon
Sublette
Lincoln
Pinedale
Pinedale Field Office
Teton
Fremont
Bridger-Teton N.F.
Kemmerer
Kemmerer Field Office
Evanston

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Wyoming Sage Grouse Land Use Plan Amendments

Map 3-33: Lands with Wilderness Characteristics



- LUP Amendments Planning Area
- BLM Field Office Boundaries
- Forest Service Planning Unit Boundaries
- Lands with Wilderness Characteristics
- BLM & USFS Surface Management
- County Boundaries

Bridger Teton N.F.
Teton
Fremont
Pinedale Field Office
Pinedale
Sublette
Lincoln
Rock Springs Field Office
Kemmerer
Kemmerer Field Office
Evanston
Rock Springs
Green River
Sweetwater
Carbon
Rawlins
Rawlins Field Office
Natrona
Carbon
Medicine Bow N.F.
Casper Field Office
Casper
Douglas
Converse
Niobrara
Lusk
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Newcastle Field Office
Sundance
Crook
Weston
Newcastle
Thunder Basin N.G.
Albany
Laramie
Laramie
Wheatland
Platte
Goshen
Torrington
Cheyenne
80
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90

0 20 40 60 80
Kilometers
0 20 40 60 80
Miles

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